

Evaluation of course PROPSY305, Cognitive Psychology, *Spring & autumn semesters 2020*

Introduction

This report is written by the course *emneansvarlig*, Prof. Mark Price, with contributions from Prof. Anita Lill Hansen. The course is given in English and is open to international students. There are 3 main lecture modules: ***Perception, attention and consciousness***, taught by Mark Price; ***Memory***, taught by David Pearson who is an external guest lecturer; ***Human thinking, belief formation and rationality***, taught by Anita Lill Hansen. Students also complete a research project (*emneoppgave*). Continuous assessed assignments replace an end-of-semester exam. For UiB students the course is assessed on a pass/fail basis without grades, but is graded for international students.

The evaluation of the course by students is based mostly on online surveys containing both multiple-choice questions and free-text answers. This report contains results for the surveys conducted for students in both the spring and the autumn semesters, each presented at the end of a semester. In each semester, separate surveys evaluated (a) the course in general, including assessment methods, (b) the various alternative teaching formats used by Mark Price in his teaching module on *Perception, attention and consciousness* (including use of online lectures, online exercises, and student peer review), and (c) the new course module taught by Anita Lill Hansen on *Human thinking, belief formation and rationality*.

Response rate for surveys was approximately 100% of home student and exchange students. For the spring semester, n=45 for all surveys, including 2 exchange students. For the autumn semester, n=53 for all surveys, including 5 exchange students.

Original data for the spring semester are available at:

<https://mitt.uib.no/courses/23629/quizzes/12029/statistics>

<https://mitt.uib.no/courses/23629/quizzes/12028/statistics>

<https://mitt.uib.no/courses/23629/quizzes/12041/statistics>

Original data for the autumn semester are available at:

<https://mitt.uib.no/courses/24645/quizzes/12432/statistics>

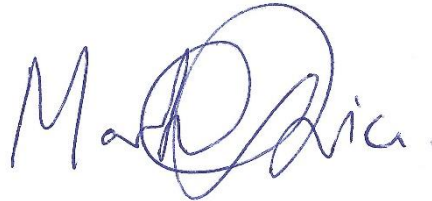
<https://mitt.uib.no/courses/24645/quizzes/12442/statistics>

<https://mitt.uib.no/courses/24645/quizzes/12441/statistics>

Shorter surveys also collected feedback from students for individual workshops, either during the workshop or just after it. These immediate surveys were more extensively used in the autumn semester.

In many parts of this report, data from the two semesters under evaluation are presented alongside data from previous semesters, in order to build a more cumulative record.

This report begins with an outline of changes made to the course on the basis of past feedback from students, and the COVID-19 pandemic. It then summarises the evaluations of the overall course, of the teaching module by Mark Price, and of the module by Anita Lill Hansen. These are followed by more detailed descriptions of students' ratings and verbal comments.

A handwritten signature in blue ink that reads "Mark Price". The signature is written in a cursive style with a large, circular flourish over the "P".

Mark Price, 29 March 2021

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1. Recent changes to the course

Main pre-planned changes to the course were:

- A new full-time position (Anita Lill Hansen) to teach themes within higher cognition. This part of the course was totally revised.
- A complete revision of the format and structure of online parts of the course, developed with advice and technical support from the UiB Learning Lab. Online lecture videos were moved from Vimeo to the UiB Kaltura platform within Mitt UiB.
- A move towards a more blended teaching format, with expansion of themes taught in an online format. This allows students to micromanage their study timetable for many parts of the course in a much more flexible manner, and enables the course to overlap with the clinical practice periods that most of the students need to take part in for course PROPS306. It allows a massive expansion of the time available for students to study major parts of the course that had previously been criticised as too intensive.
- Addition of new obligatory online activities to stimulate student interaction during online parts of the course.
- Obligatory participation in a workshop on consciousness that was previously only voluntary.

In addition, the Covid pandemic and campus closure over the majority of both semesters forced most of the planned classroom workshops into online format, for example using platforms such as Zoom. In the autumn semester, teaching was totally online.

2. Summary of evaluation for overall course

Compared with the autumn 2019 cohort, feedback from students over these 2 semesters in 2020 was markedly more positive about almost all aspects of the course. In terms of ratings from the evaluation, satisfaction appeared to return to the higher levels previously recorded on this course (e.g., as in spring 2019).

The large majority of students rated that each of the 3 main course modules contributed to their learning either *very much* or *to some extent* (the proportion ranged from 84% to 100% depending on course module and semester). Ratings were more positive on average than in autumn 2019. For the new teaching module on **Human thinking**, 93% of students during the autumn semester rated the module as contributing *very much* or *to some extent*, suggesting this new module is largely successful.

All 3 teaching modules were rated as having about the right difficulty level by the majority of students. This included the module on **Perception, attention and consciousness** which had been rated as *too advanced* by 62% of students in autumn 2019, but was now rated as *about right* by 82% and 75% of students in successive 2020 semesters. Learning goals for the 3 modules were rated as *clear* or *adequate* by the majority of students (80%-98%).

Overall administration and organisation of the course were rated as *excellent* or *good* by most students (93%, 68% for each semester respectively), and remaining students mostly rated these as *adequate*.

Most students (93%, 89% for each semester respectively) rated the new course website as *excellent* or *good* (with 49% and 55% *excellent*), indicating a large degree of student satisfaction, but also room for continued improvement.

Most students rated that teachers were receptive to questions and had prepared their live teaching activities well.

Most students rated that they found cognitive psychology to be interesting, and a slight majority rated that they had found it to be more interesting and relevant than they had expected. Unfortunately, a small minority found it uninteresting and irrelevant (7% and 12% for successive semesters).

Most free-text comments were positive about the overall course. Many students commented that the workload was more demanding than they were used to, with some students appreciating and benefitting from this, but a minority experiencing this negatively (especially in the module on **Perception, attention and consciousness**). To help this minority of students, future course introductions could place more emphasis on how to navigate through the course materials in a selective manner. A lot of helpful feedback was provided in students' free-text comments about what they liked most and least in each

teaching module. In this area, opinions varied widely between students – for example about the value of different learning formats. Although it is not possible to please all students with all activities, the course introduction could place more emphasis on explaining to students how to pick and choose among the activities that will benefit their own learning style. Detailed comments on individual teaching modules have been passed on to the respective teachers to help them with continued improvement of their modules. For example: (1) Many students asked for improvement to the online structure of a teaching theme on Mental Imagery; (2) Some students found it uncomfortable to be picked out to respond to questions in English; (3) Students suggested parts of the course where online lectures could be expanded, and parts of the course where there is some repetition of content from other courses they have taken.

One exchange student and one Norwegian student expressed a specific problem with language. The exchange student had found it hard to join group-work due to home students speaking in Norwegian, while a Norwegian student had struggled with communication in English. The conflicting needs of home students with poorer English skill, and exchange students struggling to become part of the class community, need to be further discussed during course introductions so that students are aware of the problems and can contribute to finding consensus solutions.

The major re-structuring of this course, with a shift towards even more blended learning, many new activities, and a new format for the course website, can be considered as broadly successful. Students voted for the course organiser to receive their annual teaching prize in spring 2021.

The unusually negative ratings of the autumn 2019 cohort have not been repeated. However, it is also notable that ratings were not necessarily better than in spring 2019. For example, some of the ratings for the module on **Perception, attention and consciousness**, despite being good, were if anything lower than in spring 2019. This may underscore the importance of cohort effects when interpreting student feedback: The profile of individual classes appears a more important influence on ratings than even large modifications in course design.

3. Summary of evaluation of assessment methods

Students mostly gave positive appraisal of the 2 ungraded essays that form the main assessment assignment in the course. Feedback was much more positive than from the autumn 2019 cohort, and was similar to other previous semesters. The majority of students rated that they learned more from this assessment method than from traditional graded exams, that their individualised feedback had been useful, that familiarisation with the teachers' marking rubric has been useful, that essay titles had been related to the course learning goals, and that they had gained transferrable skills in writing. For most students, this type of assessment was rated to make no difference to their work effort, but to increase their learning outcome. Only a small minority of students reported trying to rely on previous knowledge to shortcut through the course. The pedagogic advantages of the assessment method were illustrated by many free-text comments, including appreciation of the learning value of having to revise an essay, although a small minority of comments expressed frustration at the difficulty of passing the essays at the first round of writing.

Modifying the essay writing from a 2.5 hour classroom assignment to to a one-day home exam format (which was a pandemic adjustment), was described as beneficial for learning by several students.

The majority of students reported that it had been useful to write a practice essay, to peer review other practice essays, and to receive peer reviews. Perceived value of this exercise was similar to spring 2019 and much more positive than autumn 2019 data.

The multiple-choice test, given on syllabus from the first part of the course, was rated by a slight majority of students to benefit overall learning, and to encourage covering the syllabus. The test was described by most students as being easy, and more of an end-goal to motivate taking the staggered quizzes (from which most questions were selected), than a learning experience in itself.

4. Summary of evaluation of semester projects

Although the unusually negative feedback on *emneoppgave* projects from the autumn 2019 cohort of students was not repeated in 2020, opinions on the projects differed widely among students. A slight majority of students found the projects to be a useful learning experience though a minority did not, and some were unsure. There were also minorities who did not find their own project theme to be interesting, were unhappy about how project themes had been allocated (this was administered internally by the students), or were dissatisfied about the quality of supervision they received (e.g., too little feedback from supervisors, unanswered questions, or RAs who were given data to process without proper involvement in the project and explanation of the data.)

Reaction to the project conference was varied. Text-comments indicated that some students did not find it useful at all, while others claimed to learn a lot and described it as the best project conference they had been to. In their formal ratings, only around half of students found it useful to present or listen at the project conference.

Most students rated that their project group had worked well together in terms of communication and work-sharing, and the minority who rated the opposite was smaller in both 2020 semesters than in 2019. However, free-text comments indicated that when problems occur, they generate a lot of frustration and stress. One student suggested some formal method of within-group evaluation to address this.

Several students wrote more general critiques about the need, and learning benefits, of doing *emneoppgave* projects each semester.

On the basis of this feedback, the *emneansvarlig* will (1) disseminate more detailed guidelines to future supervisors so they know what their expected role is, (2) will check with students that they are happy with their supervision *during* the course of the semester, (3) will investigate the possibility of introducing within-group peer evaluation, and (4) will continue to discuss with colleagues about the need to revise the whole *emneoppgave* concept.

5. Summary of student views on online learning

In each semester, a slight majority of students rated that the shift to online learning either helped them to learn more, or made no difference to learning. About half of students rated that they enjoyed the online learning more, or that it made no difference. When asked to choose their optimal course design, students were split over whether they would keep online format for most activities other than workshops, or would opt for a lot less online learning. These data suggest that students have quite diverse views about online learning and that it will be challenging to satisfy all students with one learning format. This variation of views was also represented in free-text comments which illustrated the advantages and disadvantages of online learning. It is nevertheless striking that so many students were positive to the online format, especially in the second semester when everything was online, and when the online format was clarified more in advance and was freer of technical problems; in that semester, there was actually a majority vote for *total* (19%) or *mostly* (51%) online learning. Very few students rated that their preference was for little or no online learning.

Online lectures were mostly popular, and perceived to be beneficial for learning. Students commented on how this format allowed them to study at their own tempo, pause and replay, etc. Views on the optimal length of online lectures varied from around 10 minutes to 30 minutes, with 20 minutes as an approximate average. Some of the older and longer online lectures in the course should therefore be progressively replaced with shorter lectures.

Some students commented that written transcripts of online lectures were very useful, when available. Some comments suggested this might be particularly useful for students who struggled with the level of the course, perhaps partly as it is delivered in English. Use of transcripts should therefore be expanded.

6. Summary of evaluation of Mark Price's module

General format

The large majority of students (73% and 89% for each semester respectively) rated the new online format for this part of the course as successfully providing "*a large amount of learning material for you in an accessible and easy-to-navigate manner, with variation in learning format, and with the opportunity to study some topics in more detail if you wanted to*". The majority (84% and 74%) also rated the online format as successful in striking "*a good balance between helping you keep up with the course schedule, and maintaining flexibility in your learning timetable*."

Online lectures

Most students reported viewing all the online lectures, in their entirety, and very many reported that they replayed some parts of the lectures again. Most students reported that they managed to view these lectures by the suggested deadline on their course planner; interestingly the percentage of students achieving this was only marginally higher than in 2019, when available time was far more limited. Many reported having technical problems with viewing online lectures, but were also able to resolve these. (Most problems were linked to instability in Mitt UiB.) A large majority of students reported the lectures to be *clear* or *very clear*, and *interesting* or *very interesting*. Most rated the level as *about right*, although for 13% and 17% (each semester), they were *too advanced*. Revision questions, provided alongside each online lecture, were rated as useful by most students.

A clear majority rated the online lectures to be *similar* or *better* than live lectures in terms of *understanding and overall learning experience*, with more students showing a preference for online lectures than for live lectures. This positive feedback on online lectures appeared even higher than in previous semesters. This might reflect shifting attitudes, lack of comparison with the same teacher giving live lectures, or improvement in the quality of the online lectures. In term of their enjoyment, more students had a preference for live than a preference for online lectures; however, in the autumn semester which was completely online, about as many students rated the online enjoyability as *better* or as *similar*, compared to the number who rated online enjoyabiity as less.

As has been observed previously on this course, large changes in the proportion of online lectures appear to have little influence on students' ratings of whether the proportion of online lectures should be reduced or increased. This a good example of an evaluation question that does not provide useful information.

Most students had no strong opinion about whether it was better to view video-recordings of live lectures from a previous semester, or view purpose-made online lectures. However, of those expressing a preference, many more preferred real live lectures or online lectures

than preferred recordings of older live lectures. This suggests that, in the longer term, recordings of live lectures should be progressively replaced by dedicated online lectures.

Obligatory online quizzes

These were rated by most students as helpful for keeping up with the course schedule, and helpful for learning and retention. Difficulty level was rated as about right by most students. About half agreed that quizzes should be obligatory, and only a minority would have specifically preferred them to be voluntary. Free-text comments mostly supported the existing format for the quizzes, and backed up the learning benefits and time-keeping benefits of this assignment, even if a small minority resented the extra workload and claimed no learning benefit. A few students commented that some quiz questions were too complex in their wording. One concern with the quizzes is that some students might compromise teaching aims by sharing answer-lists with their students; this was corroborated by one free-text comment, even though "cheating" of this type was not reported in multiple-choice ratings. Probably there is no way to prevent this without developing much bigger question banks, but it could be raised as an issue with students during course introductions. It would nevertheless seem that many students, perhaps most, are working independently with the quizzes.

It is notable that the perceived benefits of the quizzes were similar to previous semesters despite the fact that the number of quizzes had been increased and that students had previously been more likely to rate that the amount of quizzes *should not* be expanded than that they *should* be expanded. This is another example of how student evaluations do not necessarily give the best indication of how courses should be developed.

Obligatory discussion forums

Most students reported finding it useful for their learning to write answers on the discussion forums, but only about half found the interactive task of reading and commenting on other posts to be useful. About half rated that the activity was at least somewhat successful in promoting engagement and student interaction. It is disappointing that more students did not find the interactive part of the exercise more useful, and that a small minority appeared to find the whole exercise a waste of time. This suggests there is scope to improve the perceived relevance of the interactive part of these discussion forums. One student provided a suggestion for how this could be done.

Workshops

This part of the course included 3 major workshops, two non-obligatory, and one obligatory. A 4-hour attention mind-mapping workshop, that was considered a very useful and successful learning activity when previously conducted live, was attended by only around half the class. It was rated as useful by a large majority of participants in the spring semester, but only by a slight majority in the autumn semester. The drop in ratings during the autumn semester occurred without changes in procedure, and may be another good example of cohort effects. However, it is clear from text comments that this workshop is not

ideal in an online format, and an alternative workshop format could be tried in any future semesters when class-room teaching remains cancelled.

Attendance at an essay writing workshop was higher (nearly $\frac{3}{4}$ of the class), and nearly all participants rated this workshop as useful, with over half rating it as *very useful*. On the other hand, a minority found that the workshop left them feeling overwhelmed because they realised their grasp of the syllabus was not as good as they had thought. Although stressful, this could still be considered to serve a useful pedagogic aim. Future workshops of this kind could include proactive advice for students falling into this category.

The consciousness workshop, now obligatory and lasting a whole day, contains different assignments. Detailed ratings taken during the workshop via Zoom polling were able to pinpoint that the first and largest part of the workshop was considered useful by almost all students, but that a second part was considered useful by a much smaller majority. This suggests which parts of the workshop structure could be improved in future. Some students provided detailed suggestions for how the task and format of the second part of the workshop could have been much better specified, and these suggestions are much appreciated by the teachers. Most students rated that the online format of the consciousness workshop was as good or better than a class-room based version.

Relative usefulness of different learning activities and resources

Students were asked to rate the relative usefulness of each type of learning activity/resource. *Online lectures* were rated as especially useful, and most students again rated *quizzes* and *discussion cafés* to be useful. (Ratings of the latter 2 activities were if anything slightly less positive than in other parts of the survey, although it was still a relatively small minority of students who did not find these useful.)

Relative to previous semesters, the usefulness of the *text book* was rated higher, and fewer students did not use text books at all. Sign-posting the text book reading as an activity in the online stream of learning activities may therefore have had some beneficial effect, although a substantial minority of students were still reporting no use. However, free-text comments explained that some students were not using the text book because they found the lectures to be sufficiently clear.

Most students found *reading guides* to be useful though a small minority still did not use them. Use of *journal papers* and *reading outside course pensum* were rated similarly to previous semesters.

The lists of *lecture questions* that replaced teachers' own written lecture summaries were rated as useful by most students, even though ratings were marginally lower than previously obtained for these lecture summaries. The teacher opinion is that the question lists are more beneficial to students as they require more active learning.

Live workshops were rated as slightly less useful than in previous semesters, perhaps reflecting the shift to online workshops. This trend needs to be considered in the light of

ratings in other parts of the survey, which gave strong approval of online format and learning outcome of some workshops.

There were also slight drops in ratings for the use of *peer discussion* outside the classroom, especially in the autumn semester, with more students reporting no discussion at all. This is unsurprising given the pandemic lockdown. On the other hand, it is also notable that this was only a small drop, and most students still reported this kind of discussion as having taken place and being useful.

Reading *examples of past essay questions, and past answers*, was rated as useful by a large majority of students, and the small proportion of students who did not study this resource at all was about half of previous semesters.

In their free-text comments, students offered diverse and conflicting opinions on the varied learning resources, with some appreciating the diversity and the ability to pick and choose, and others finding it stressful to not be able to use all resources. To minimise this kind of stress, the course introduction could expand advice to students on how best to select between resources.

7. Summary of evaluation of Anita Lill Hansen's module

General

The study plan and format of learning materials for this part of the course were positively rated by the large majority of students (43% *very good* and 49% *good*). The majority of students were also positive about the thematic content and literature (60% *strongly interesting, relevant and useful*, 38% *somewhat interesting, relevant and useful*).

Organised group work / active learning

Evaluation of interaction-based case work, from the 60% of students who participated in it, was very positive; most found it *strongly useful*, with all but 1 of the remaining students rating it as at least *somewhat useful*. Of students who did not participate, most reported that their reasons for non-participation were time pressure and/or that the activity was not obligatory. Convergent with other parts of the course evaluation, some students suggested that this part of the course be made obligatory.

8. Actions to be taken on basis of course evaluation

On the basis of the student feedback, in combination with teachers' experience, the following areas can be prioritised for course development over future semesters:

- Better discussion, during course introduction, of how to selectively navigate the various learning resources for the course.
- Participatory discussion, during course introduction, of how to integrate exchange students and balance the use of English and Norwegian during group-work.
- Improvement to the online structure of the teaching material on Mental Imagery.
- Avoid picking individual students to respond to questions in English (Memory module)
- Further minimise repetition from previous courses in some parts of the Memory module.
- Expansion of online materials in some parts of the course.
- Develop the interactive component of Discussion Cafés.
- Tutor students on the pedagogic downside of collaborative "cheating" during online quizzes.
- Modify the format of the Attention Workshop if teaching remains online.
- Retain obligatory Consciousness Workshop, but explore alternative formats for the second part of this workshop.
- Convert the interview-based case-study, in the last part of course, to an additional obligatory activity.
- Continue to improve clarity of some of the online quiz questions.
- Retain some active-learning workshops in an online learning format, even after pandemic lockdown is finished.
- Retain the new, longer, writing time of 1 day for each of the 2 main assessed essays.
- Work progressively to reduce the length of some of the older and longer online lectures in this course, and to replace older recordings of live lectures with dedicated online lectures.
- Expand the inclusion of transcripts for online lectures.
- Regarding term projects (*emneoppgaver*), the emneansvarlig will (1) disseminate more detailed guidelines to future supervisors so they know what their expected role is, (2) will check with students that they are happy with their supervision *during* the course of the semester, (3) will investigate the possibility of introducing within-group peer evaluation, and (4) will continue to discuss with colleagues about the need to revise the whole emneoppgave concept.

9. Detailed results of evaluation for overall course

Contribution of the course to students' knowledge: The extent to which different teaching modules contributed to students' knowledge was rated on a 4-point scale (*very much, to some extent, very little, not at all*). Over the last 2 semesters, the proportion of students responding either *very much* or *to some extent* varied from 100% to 84%, depending on teaching module. Full results over several semesters are shown below.

Perception, attention & consciousness	spring 2019	autumn 2019	spring 2020	autumn 2020	
<i>Very much</i>	91%	43%	76%	74%	
<i>To some extent</i>	9%	43%	22%	26%	
<i>Very little</i>	0%	10%	2%	0%	
<i>Not at all</i>	0%	2%	0%	0%	

Memory	spring 2019	autumn 2019	spring 2020	autumn 2020	
<i>Very much</i>	35%	40%	33%	30%	
<i>To some extent</i>	53%	45%	53%	62%	
<i>Very little</i>	9%	12%	13%	8%	
<i>Not at all</i>	0%	2%	0%	0%	

Higher cognition	spring 2019	autumn 2019	spring 2020	autumn 2020	
<i>Very much</i>	21%	48%	31%	42%	
<i>To some extent</i>	38%	40%	53%	51%	
<i>Very little</i>	38%	7%	16%	6%	
<i>Not at all</i>	3%	1%	0%	0%	

Assessment of the difficulty level of each lecture module: The difficulty level of each teaching module was rated as either *too advanced, about right, or too basic* in relation to students' previous learning. For all 3 modules, most students rated the level as *about right*.

Results over several semesters are listed below. For **Perception, attention and consciousness**, difficulty level was rated to be much better pitched than the previous semester despite the fact that the teacher, if anything, increased the level. For **Memory**, the level continued to be rated as ideal by most students. For **Human thinking**, a large minority rated the material as too basic in the spring semester, but this minority was greatly reduced in the autumn semester after a modification of teaching content.

spring 2019		Perception, attention & consciousness	Memory	Affect & higher cognition
<i>too advanced</i>		9%	9%	0%
<i>about right</i>		91%	88%	53%
<i>too basic</i>		0%	0%	47%

autumn 2019		Perception, attention & consciousness	Memory	Affect & higher cognition
<i>too advanced</i>		62%	2%	5%
<i>about right</i>		38%	95%	93%
<i>too basic</i>		0%	2%	2%

spring 2020		Perception, attention & consciousness	Memory	Human thinking
<i>too advanced</i>		18%	9%	0%
<i>about right</i>		82%	82%	67%
<i>too basic</i>		0%	9%	33%

autumn 2020		Perception, attention & consciousness	Memory	Human thinking
<i>too advanced</i>		25%	0%	2%
<i>about right</i>		75%	70%	87%
<i>too basic</i>		0%	30%	11%

Assessment of clarity of learning goals: Clarity of learning goals for each lecture module was rated as either *clear*, *adequate*, or *unclear*. Over the last 2 semesters, learning goals in the 3 different course modules were rated as *clear* or *adequate* by the majority of students (80%-98%). Over recent semesters, teachers have tried to improve the clarity of learning goals and this is reflected by the overall trend in ratings over the last 3 semesters. However, it should again be noted that learning goals in some parts of the course were rated more highly in spring 2019, when these goals were considerably less well developed than now. Class profile again seems to be important in how students respond to these survey questions.

Perception, attention & consciousness	spring 2019	autumn 2019	spring 2020	autumn 2020	
<i>clear</i>	91%	55%	60%	60%	
<i>adequate</i>	9%	33%	38%	36%	
<i>unclear</i>	0%	12%	2%	4%	

Memory	spring 2019	autumn 2019	spring 2020	autumn 2020	
<i>clear</i>	68%	55%	27%	53%	

<i>adequate</i>	26%	40%	53%	45%	
<i>unclear</i>	3%	5%	20%	2%	

Higher cognition	spring 2019	autumn 2019	spring 2020	autumn 2020	
<i>clear</i>	47%	40%	40%	68%	
<i>adequate</i>	29%	52%	52%	28%	
<i>unclear</i>	24%	7%	7%	4%	

Usefulness of video recording live lectures: Asked “How useful was it for you that any live lectures given in the classroom were video recorded when this was possible?”, 83% of students in spring 2020 viewed part or all of some recordings and found this useful, falling to 49% in autumn 2020. The fall can be attributed to the fact that most lecturing in the autumn semester was online and precoded, and video recording was therefore restricted to some workshops. Nevertheless, it can be seen that some students find recordings to be useful, and vanishingly few students rate such recordings as not useful. Recording benefits students who want to use them, at no cost to those who do not.

Video recording	spring 2019	autumn 2019	spring 2020	autumn 2020	
<i>never viewed</i>	33%	12%	16%	47%	
<i>viewed parts and was useful</i>			36%	21%	
<i>viewed whole session and was useful</i>	60%	78%	47%	28%	
<i>viewed some but not useful</i>	6%	?	1%	2%	
<i>no answer</i>	-	-	-	2%	

In this table, note that live lectures made up a far more substantial part of the course prior to 2020.

Administration of course: Students were asked: “How would you describe the overall administration and organisation of the course?” using the choices *excellent*, *good*, *acceptable* or *poor*. Most (93%, 68% for each semester respectively) answered *excellent* or *good* (with 49% and 47% *excellent*). This was a much higher rating than autumn 2019 but similar to spring 2019.

Admin of course	spring 2019	autumn 2019	spring 2020	autumn 2020	
<i>excellent</i>	53%	10%	49%	47%	
<i>good</i>	44%	33%	44%	21%	
<i>acceptable</i>	3%	31%	7%	28%	
<i>poor</i>	0%	26%	0%	2%	

Course website: Students were asked: “How would you describe the course website in general, both in terms of layout and content?” using the choices *excellent*, *good*, *acceptable* or *poor*. This was a new question so no comparable data is available from previous semesters. The course website was totally revised for the start of 2020 and improvements were continued over the year. Most students (93%, 89% for each semester respectively) answered *excellent* or *good* (with 49% and 55% *excellent*), indicating a large degree of student satisfaction, but also room for continued improvement.

Admin of course	spring 2019	autumn 2019	spring 2020	autumn 2020	
<i>excellent</i>	-	-	42%	55%	
<i>good</i>	-	-	51%	34%	
<i>acceptable</i>	-	-	7%	8%	
<i>poor</i>	-	-	0%	2%	
<i>no answer</i>	-	-	-	2%	

Assessment of preparedness of teaching activities: Students were asked: “Overall, did you find classroom activities to be well prepared? This includes lectures, group-work or workshops etc that were conducted live, either in the classroom or via Zoom.” using the choices *yes*, *neutral* or *no*. The large majority answered *yes*. Ratings are similar to previous semesters (data not shown)

Well prepared teaching?	spring 2019	autumn 2019	spring 2020	autumn 2020	
<i>yes</i>	-	-	87%	83%	
<i>neutral</i>	-	-	13%	13%	
<i>no</i>	-	-	0%	2%	
<i>no answer</i>	-	-	-	2%	

Did students feel welcome to ask questions? Students were asked: “Overall, did you feel welcome to ask the teachers questions and did teachers respond helpfully to any questions that you asked?” using the choices *yes*, *neutral* or *no*. Almost all students answered *yes*, which is more positive than autumn 2019 but similar to spring 2020.

Feel welcome to ask questions?	spring 2019	autumn 2019	spring 2020	autumn 2020	
<i>yes</i>	97%	67%	96%	91%	
<i>neutral</i>	3%	24%	4%	6%	
<i>no</i>	0%	2%	0%	2%	
<i>no answer</i>	-	-	-	2%	

Influence of course on appreciation of cognitive psychology: Students were asked: “How has this course influenced your appreciation of cognitive psychology?” with 4 response options. The majority of students chose the options “*I think it is more interesting and relevant than I expected before the course*” (64%, 62%) or “*My views have not changed and I find the topic interesting and relevant*” (29%, 25%), while few (7%, 6%) had negative views about the topic and selected the option “*My views have not changed and I find the topic uninteresting and irrelevant*”. Few selected “*I think it is less interesting and relevant than I thought before the course*” (0%,6%). This evaluation is much more positive than in the previous semester but similar to results from spring 2019.

Influence on appreciate of cog psy?	spring 2019	autumn 2019	spring 2020	autumn 2020	
<i>I think it is more interesting and relevant than I expected before the course</i>	76%	38%	64%	62%	
<i>My views have not changed and I find the topic interesting and relevant</i>	24%	36%	29%	25%	
<i>My views have not changed and I find the topic uninteresting and irrelevant</i>	0%	14%	7%	6%	
<i>I think it is less interesting and relevant than I thought before the course</i>	0%	12%	0%	6%	
<i>No answer</i>	-	-	-	2%	

Interest of course contents in relation to expectations: Students were asked: “Has the course content and teaching been more or less interesting than you expected?” with 4 response options. The majority rated the course as either “*more interesting*” (60%, 49%) or “*as interesting*” (31%, 36%) as expected, with a few (9%, 11%) selecting “*more boring than I expected*”. Very few (0%, 2%) chose “*as boring as I expected*”.

Interest relative to expectations?	spring 2019	autumn 2019	spring 2020	autumn 2020	
<i>more interesting</i>	68%	36%	60%	49%	
<i>as interesting</i>	32%	26%	31%	36%	
<i>more boring than I expected</i>	0%	33%	9%	11%	
<i>as boring as I expected</i>	0%	5%	0%	2%	
<i>no answer</i>	68%	36%	60%	2%	

Further general comments about the course: Most free-text comments were positive about the overall course, even from students who had not been looking forwards to this topic.

Representative examples of comments were:

- *I really enjoyed your course. You've been so engaged in our learning and enjoyment of this course. I remember being warned about you being strict and tough on us, which I find rather ridiculous now. You are fair, straightforward and cooperative. You have given us so much and been so engaged, and therefore, rightly so, demand the same back. I haven't had a better lecturer, especially with the technical stuff. From day one you had a plan for the course, have throughout been updating the course website, continuously given us all the information we need and more, been checking in on us and trying all of us to understand this subject. I'm really grateful, and mildly dread going back to the chaos previous lecturers have had. Thank you so much for all your hard work.*
- *From the first year of psychology I had the impression that cognitive psychology was quite dull. However, this course has been terrific! I have learned to appreciate and respect cognitive psychology. All the themes have been very interesting and relevant: memory, attention, perception, consciousness and higher cognition.*
- *Before the course started I was afraid it was going to be a semester of text book cramming and struggling to remember the names of many different theories (cf. my experience from first year cognitive psychology). Instead, this course has been a deeper and more conceptual learning experience.*
- *In general the course has been very good. I think the teachers have been great and helpful. I have struggled a bit with motivation, when working in the old exam-model and even had to repeat some exams. This semester is the first where I haven't seen any significant motivation problems (except in the start of Covid, but it went away quickly). To me this proves that the learning principles in this course are very good and efficient.*
- *Jeg er veldig imponert over dette emnet!*
- *Jeg føler dette kurset har fungert veldig bra, og jeg har lært masse!*
- *Er veldig fornøyd med kurset, har lært mer enn jeg noen gang har lært på et vanlig ikke-online semester.*
- *It's really been a great course all in all, and I've really enjoyed it! Keep up the good work ... and THANK YOU so much for making this such an educational semester for us despite of the situation! Your efforts are truly inspiring and many should turn to you and the way you run your course for inspiration as to how to operate an online course! ***Applause emoji x100****

Many students commented that the workload of the course was more demanding on them than they were used to up to this point in their studies. Some students appreciated the demands on them more than others, with obvious differences in the perception of how much work is reasonable. While some described rising to the challenge and benefitting from it, a minority experienced the work load more negatively. Representative examples of comments were:

- *I think it was a really good and interesting course, and you did great a job! I like that you make high demands and have a high learning pressure. At the same time as you do that, you are fair and attentive to our suggestions. Thank you!*
- *I have honestly done so much more work than I usually do, and it is quite impressive on your part that I have been motivated enough to do so.*
- *Since this was a large part of the course I felt that we got the time to tie everything together quite nicely. This helped me develop a greater understanding and appreciation for the themes and field as a whole.*
- *I really enjoyed the variation and clarity. It was easy to follow, and I am very thankful to Mark for setting up such a great structure for us. Sometimes it all was a bit overwhelming and it all could feel kind of bottomless with so many tasks and deadlines. It was helpful though and kept me working hard.*
- *The amount of work was at some point very large, but in contrast to what i have heard from last semester, I feel that the focus on this semester has been the value of learning, and not just the results.*
- *Det jeg likte best var hvor mye jeg lærte i dette emnet Det jeg likte minst var hvor omfattende emnet er i forhold til antall studiepoeng.*
- *Personlig synes jeg kognitiv psykologi er et relativt kjedelig emne, men jeg synes likevel dette har vært et laererikt kurs og jeg liker måten det er organisert med mye online. Dog er arbeidsmengden enorm sammenliknet med andre 15 poengs fag. Det er veldig mye obligatoriske aktiviteter. "*
- *Likevel syntes jeg det har vært altfor høye krav og altfor stort pensum. Å Det har vært utrolig mye jobb med det faget, som gjerne har gått ut over andre fag og gjøremål.*
- *Som tidligere nevnt - opplegget, aktivitetene og innholdet er generelt kjempebra - jeg har lært veldig mye og syns alle forelesere ar vært veldig positive og opptatt av at vi skal lære best mulig :). Men det er for mye å rekke over med tanke på at vi også har andre fag vi skal kunne få tid til å lese på og sette oss inn i.*
- *I tillegg tenker jeg at det er viktig at selv om det er fristende å legge til flere videoer, forelesinger, og oppgaver online for å dekke og utdype flere spennende temaer bør de kanskje uansett ikke overskride den tiden det ville tatt på en ordinær forelesing. I en del moduler ble den samlede tiden på alle videoene totalt ganske mange timer, og med tanke på at man da i tillegg skal skrive repetisjonsoppgaver, lese tilleggslitteratur, svare på quizer, skrive diskusjonskafeer, skrive emneoppgave, forberede workshops, ha essays, intervjuer - framføringer - og ha tid til praksis og aktiviteter også i andre fag som tilsvarer like mange studiepoeng - så blir det fort veldig mye.*
- *Føler hele semesteret har generelt vært veldig utfordrende og har opplevd lite mestring selv om jeg har jobbet veldig hardt. Jeg føler uansett hvor mye jeg har jobbet, har det ikke vært godt nok.*

- *Eg har jobba jamnt og trutt ca 3-4 i gjennomsnitt kvar dag gjennom semesteret og kanskje det er eg som er ekstremt treig og lite smart- men eg hadde ikkje sjans å kome gjennom alt av litteratur OG repetere og faktisk lære. Kanskje kunne det vorte konkretisert meir kva som er viktig samt redusert litt på både mengde førelesingar samt anbefalt litteratur.*
- *Brukte ikke alle andre ressurser rett og slett fordi jeg har vært litt lat dette semesteret*

Free-text comments on the different lecture modules: Students were asked what they liked most and least about each lecture module.

a) Module on perception, attention and consciousness.

The majority of comments were positive, including praise for structure, clarity and variation in format, with some disagreement about the value of individual activities. The most consistently critiqued part of the module was the formatting of the text-based theme about mental imagery which many found difficult to navigate due to the complex hierarchy of links and lack of videos (although there were some students who liked this best!). Some students in the spring semester critiqued the fact that many parts of the online materials were not available from the start of the course, making it difficult to anticipate future workload; this was partly because materials needed to be revised in light of the pandemic lockdown, and partly because parts of the module were being progressively upgraded from last semester's content. Although some students missed more live communication and discussion, there was praise for online lectures and generally for the flexibility of the online format. Opinions varied on which parts of the module were most interesting. For example, some students still struggled with the topic of consciousness, despite attempts to improve this part of the course. On the other hand, some students picked out consciousness as the part they liked most, and appreciated how the previous aspects of the module "came together" when discussing consciousness. Some students commented that it took some time to get used to the style and terminology of this part of the course, but that this eventually became very helpful.

As has always tended to be the case for this part of the course, the satisfaction of many students is offset by the fact that a minority of students found the module too difficult, too technical, too abstract/philosophical, or too much work. Several students commented that the workload was too large even if they appreciated other aspects of the module. While many liked the various online obligatory assignments, and commented on their learning and motivational value, others found them too much. Some claimed they got little out of the workshops, while others liked them the most. Some commented that they did not learn much from the peer commentary part of the discussion café assignments. Representative examples of comments were:

- *I just wanted to conclude this survey with saying THANK YOU so very much for a very educational semester! I've really learned so much about perception, attention and consciousness and I will treasure that always. Keep up the good work that you do, Mark! You're a true inspiration and a super star of a professor! Thank you!!!*

- *I've honestly really enjoyed Mark Price's lectures on perception, attention and consciousness this semester! Before starting the course, I was really nervous because cognitive psychology has never really been my strong suit and I had a very hard time with it during my first year. I especially found perception to be very difficult back then. Now I feel like I have a very good understanding of the different concepts and I can truly say that I have learned a lot about these different topics this fall!*
- *I was very impressed with this part of the course. It was a lot of work, but because it was so well organised and Mark Price made such an effort it definitely felt like it was worth it. I felt like I learned a lot. It felt like a lot was expected from us, but he also expected a lot from himself in a way that was very motivating. I also loved the teaching methods and the way the course was structured - with the big why and how questions, and everything building on what we had previously learned. I don't think I have ever before felt like the professor has had such a clear understanding of what they wanted us to get out of the course - and how we could get there. I also think that the fact that it was all online was a good thing, because it made it less stressful to keep track of everything, and it made it possible to rewatch the lectures.*
- *What I liked most and least are a bit intertwined. At first I found the teaching style a bit confusing (the using of analogies and "catch phrases"), but after the first one or two weeks (basically after the practice essay) it all became much clearer, and then it was very helpful. I think for me, it was all about getting a feel of the general introduction first, and really understanding what the computational problems were about, and then it became easier. But I'm thinking that this can make it harder for those who needs even more time to get "into" the subject. Also the learning goals became clear eventually, but they were also a bit hard to get a grasp of in the first lecture.*
- *It was comforting that the course was so thorough, made me confident that the course would provide me with sufficient information.*
- *Var for teknisk avansert. Men veldig lærerikt. Kanskje lurt å tilpasse mer for dem som ikke er så teknisk flinke.*
- *The most frustrating part of the module taught by Mark was the overall workload, which was way higher than I've been used to and caused a fair bit of frustration and stress. This was also probably what made the module so educational. Having to complete obligatory assignments nearly every week made it impossible to procrastinate and thus made sure that I learned what I had to learn.*
- *I was so stressed and far behind all the time that I didn't manage to find time to read recommended literature, I found it very difficult to work from home and with only online lectures*

b) Module on memory.

In the spring semester, this module was classroom-based, early in the semester before the pandemic lockdown. The great majority of students made very positive comments about the pedagogic clarity, structure and interest of the lectures, and about how knowledgeable the teacher was about this topic. There was appreciation for bringing in an external expert in this area, and for his respectful answering of student questions was praised. However, the majority also complained that this part of the course is far too compressed in time (3 days of intense lecturing) and should be spread over more days, and with more opportunity to reflect

and integrate the content at the end. Some commented on repetition of topics that had been covered in previous courses (PSYK114) (e.g., short- versus long-term memory, episodic versus semantic memory, and varieties of amnesia including HM) albeit at a deeper level. On the other hand, others commented that they appreciated the emphasis on newer research in these areas.

In the autumn semester, recordings of day-long lectures were made available, along with short, pre-recorded summary lectures and a revised reading list that included text book chapters for each lecture topic. Contact time with students was restricted to 3 consecutive afternoons of 3-hour webinar. In general, students gave similar praise as before regarding the structure and pedagogic clarity of the teaching, including comments on how good/comprehensive the lecture slides were. The online summary lectures were generally regarded as very useful. Few claimed to have had time or motivation to go through the longer recorded lectures, although this was not required of students. Several students found that some of the content in the webinars was too repetitive of content in the online lectures, and that groupwork sessions were too long. Some commented that it was uncomfortable to be picked out to make comments in English. Some commented that they did not have time to cover this part of the course in enough detail before the first assessment essay (especially as the summary lectures were not available earlier in the semester) and that this part of the course was still too compressed. For example, some students did not attend the webinars because they were still struggling to get through the basic material.

- *Because this semester was very short on time, I really have to give credit to the shorter lectures that were made for David Pearson's course. I honestly didn't have time to watch the long lectures towards the end (which is honestly quite sad because I would have loved to watch these) so I'm very thankful these were made because they gave a very good overview of his part of the course. He also has a very pedagogic way of teaching and I really liked the way the lectures were made! All terms were explained really well and I felt like I always knew what he was talking about. I also had very good use for all my notes from his short-lectures on my essay, so it felt very rewarding in the end.*

c) Module on human thinking, belief formulation and rationality.

In the spring semester, students mostly liked the interview assignment that is a core element of this module, though some commented on how it would have been advantageous to have more information about it earlier in the semester. The clinical and applied emphasis of this part of the course was praised. Opinions on the reading materials varied, with some liking the Kahneman book and others finding it too one-sided as a main text. While some liked the various journal papers that were part of the course, some papers were critiqued as too difficult. The main area where improvement was suggested was to expand the length, depth and range of the online lectures; many students commented that these did not cover the core syllabus of the module in enough detail, that the module felt too thin in terms of content and that they felt they had to make up for this on their own. It needs to be stressed that these online lectures had to be made rapidly in response to the

pandemic situation, and that the short format was intended to avoid overloading students with too much work over a short period.

In the autumn semester, students were generally very complimentary about the clarity and structure of this module, with many finding it very interesting although there were a few comments about thematic overlap with previous courses (e.g., PSYK112). Most comments on the reading materials (papers and Kahneman book) were positive. Students found the interview assignment to be an innovative and fulfilling way to reflect on the course themes although some claimed (with regret) that they did not take part due to time pressure. Opinions were quite varied regarding the short online lectures; some praised them as clear and useful, while others found them too thin in content. Several students praised the use of transcripts for the online videos, but several also suggested that the lectures would have been easier to follow in the lecturer's native Norwegian tongue and felt that quality was being sacrificed to accommodate exchange students. There were several comments that this part of the course felt too compressed and that students were tired by this stage in the semester. Unfortunately, this is a typical problem in the short autumn semester.

- *Bra og overforsiktige forelesninger. Veldig fint med mulighet til å utføre intervju for å få mer innsikt i høyere kognisjon.*
- *Jeg synes det var kjekt å lære pensum ved å konstruere og gjennomføre et intervju. Det var og lærerikt å få mulighet til å gjøre dette i mindre grupper, slik at vi kunne diskutere pensum sammen.*
- *Jeg likte også veldig godt intervjuet og samtalen om intervjuet i grupper på zoom. Det var lærerikt og veldig fin størrelse på gruppene. Det jeg likte minst var at intervjuet var frivillig, og dermed vanskelig å motivere gruppe-medlemmer til å delta og gjøre en innsats.*
- *What I liked the most was the interview project, which I found very interesting. It was an unusual, but efficient way to learn about higher cognition, and to apply that knowledge. What I liked the least was the lack of full-length lectures. The short introductory lectures were quite superficial, so we had to acquire all of the more in-depth knowledge about higher cognition on our own.*

Some students suggested that the interview assignment should be obligatory in order to ensure equal contribution from group members, while one student was happy to be able to withdraw from this assignment due to social anxiety.

Free-text comments on integration problems for exchange students: In the autumn 2020 semester, one exchange student commented on finding it difficult to integrate into activities with the Norwegian students.

- *It was really hard to participate as an exchange student because the Norwegian students were always encouraged to speak Norwegian and English was not used often.*

On the other hand, some Norwegian students claimed to struggle with parts of the course that were conducted in English.

- *Jeg likte minst zoom-forelesninger og workshops. Dette er fordi det var et press om å snakke høyt på engelsk, og selv om det sikkert er sunn eksponering, hadde jeg lite læringsutbytte fordi det bare var stress.*

Policy during group-work is to allow Norwegian students to discuss in their native tongue where possible (i.e., no exchange students present), but also to ensure that exchange students are able to work in English-speaking groups. To avoid that students are forced to speak English when this is uncomfortable for them, groups are usually asked to elect a spokesperson to report back to the plenum after groupwork. Although this policy seems to usually work well, the comments above will be shared with teachers to minimise the risk that any future student experiences the above frustrations.

10. Detailed results of evaluation of assessment methods

10.1 Background

On the lectured part of the course (9 study points), students are primarily assessed via 2 obligatory written essays. These are usually written in class, online, with full access to literature. Writing time is usually 2 hours 30 mins plus 15 mins upload time. Maximum word count is 1100 words. Essay questions are broad and conceptual, encouraging students to integrate and apply their knowledge. Essays are written shortly after the end of the lecture module being assessed, with usually only a very few days for revision. Essays are returned to students with individualised written feedback. Students with weaker essays are then asked to revise their essay(s) over a period of a few weeks and resubmit. If an essay is very poor, and shows little engagement with the course syllabus, it can be failed without the opportunity to revise it. Due to the pandemic, essays during both semesters were written at home with an extended writing time of 7 hours.

During the spring semester, 67% of home students passed essay 1 without needing to revise the essay. Of these passes, the examining teacher considered many (11/29) to be excellent. One third (33%) of essays needed to be revised (compared to 43% the previous semester). All students eventually passed essay 1, although exceptionally 2 students were given a second round of revision and some more personal tutoring before they reached a pass standard; this exception was made owing to the pandemic situation. The number of students needing to revise essay 2 was less, and all revisions were accepted. In general, teachers evaluated the average standard of essays as much better than the previous semester. This could be due to a cohort effect, to the reduced time pressure on students during learning phases of the course, or to the longer time given to write the essays.

During the autumn semester, 62% of home students passed essay 1 without revision (31/50). One student failed outright, and 36% were asked to revise the essay (18/50). Of essays that passed, the examining teacher considered many (9/31) to be excellent. Of students who had to revise their essays, 4 resubmitted essays that were still not considered good enough. Rather than fail these students, each was asked to submit a reflection note of approximately a page, comparing their own essay to an example of an excellent essay that was volunteered by another student in the class. These reflection notes indicated good insight into the weaknesses of the essays, and also described motivation to use this experience to improve essay-writing in future. From the teacher perspective, this was a useful innovation in assessment design and could be continued in future semesters.

Additionally, students usually have to pass a closed book, pen and paper multiple-choice test in a classroom setting. Many questions were repeated verbatim from short online quizzes that students had to do online after viewing online lectures. Due to the pandemic situation, the test was now run as an online quiz that students took at home, with open book format, and questions were selected randomly for each student from a larger question bank. Instead of including many unseen questions, all students had to generate one test

question themselves, with 3 alternative answers, before the test. All these questions were moderated by the teacher, and made available to the whole class. A subset were included in the final test. In the spring semester, students were given a few days to complete the test, allowed 3 attempts maximum, and had to reach a 75% to pass. All students passed. In the autumn semester a more stringent procedure was tried out; students had 2 hours to complete the 40-item test, only had 1 attempt at each question, and had to get 80% correct (note that all questions were ones that students had previously had an opportunity to revise). All students passed.

10.2 Evaluation data

Comparison of assessment method with more traditional methods: Students were asked to agree/disagree with the statement: "I feel I **learned more** from having ungraded assessed essays with feedback and the opportunity to revise the essay, than by writing more standard graded (A-F) essays." Many more students agreed (76% and 74%, over each semester respectively) than disagreed (2%, 6%) with this statement, while a few (18%, 11%) were neutral. For exchange students the question was not applicable as they are graded (hence percentage totals do not add to 100%). Enthusiasm for the method was similar to spring 2019 and much higher than during autumn 2019.

Learned more?	spring 2019	autumn 2019	spring 2020	autumn 2019	
<i>agree</i>	76%	57%	76%	74%	
<i>neutral</i>	24%	26%	18%	11%	
<i>disagree</i>	0%	17%	2%	6%	

Was teachers' feedback on essays personally felt to have been useful by individual students?: The usefulness of the written feedback that each student personally received on their essays was rated separately for essays 1 and 2. For both essays, the majority of students agreed it had been useful. For essay 1, ratings are improved over autumn 2019 and are similar to spring 2019 (same teacher for each semester).

Useful feedback essay 1	spring 2019	autumn 2019	spring 2020	autumn 2019	
<i>agree</i>	82%	50%	78%	74%	
<i>neutral</i>	18%	31%	16%	17%	
<i>disagree</i>	0%	19%	7%	8%	
<i>no response</i>	-	-	-	2%	

Useful feedback essay 2	spring 2019	autumn 2019	spring 2020	autumn 2019	
<i>agree</i>	?	53%	57%	64%	
<i>neutral</i>	?	29%	38%	21%	
<i>disagree</i>	?	15%	7%	13%	
<i>no response</i>	-	-	-	2%	

Which aspects of the assessed essays were useful for learning?: Students selected which of 9 aspects of the essays they found to have been useful to their overall learning experience. Percentages of students selecting each point, were as follows (given in order of frequency of students selecting that item):

autumn 2020

- 92% You were given feedback on your essays
- 90% The essays were on separate days rather than grouped in one exam
- 83% You had open access to all books, notes and online resources
- 81% The essays were written online rather than by hand,
- 77% You had a chance to revise your essays if you failed the first time
- 75% The essays had to be short (but concise and dense in content)
- 65% The essays were ungraded
- 65% The essays were set very soon after the end of the teaching modules being tested
- 44% The essays questions were quite conceptual

spring 2020

- 84% You had a chance to revise your essays if you failed the first time
- 89% You were given feedback on your essays
- 89% The essays were on separate days rather than grouped in one exam
- 84% You had open access to all books, notes and online resources
- 75% The essays were written online rather than by hand,
- 75% The essays had to be short (but concise and dense in content)
- 66% The essays were ungraded
- 66% The essays were set very soon after the end of the teaching modules being tested
- 41% The essays questions were quite conceptual

autumn 2019

- 80% You had a chance to revise your essays if you failed the first time
- 78% You were given feedback on your essays
- 78% You had open access to all books, notes and online resources
- 76% The essays were on separate days rather than grouped in one exam
- 76% The essays were written online rather than by hand,
- 51% The essays had to be short (but concise and dense in content)
- 49% The essays were ungraded
- 41% The essays were set very soon after the end of the teaching modules being tested
- 27% The essays questions were quite conceptual

spring 2019

- 88% You were given feedback on your essays
- 79% The essays were written online rather than by hand,
- 76% You had a chance to revise your essays if you failed the first time
- 76% The essays were on separate days rather than grouped in one exam
- 73% The essays had to be short (but concise and dense in content)
- 61% You had open access to all books, notes and online resources
- 52% The essays were ungraded
- 52% The essays questions were quite conceptual
- 48% The essays were set very soon after the end of the teaching modules being tested

Ratings are similar to previous semesters, especially to spring 2019. Most students were rating most aspects of the essays as beneficial.

Usefulness of marking rubric: In a new question for the current 2 semesters, students were asked: "To what extent was your essay writing helped by your knowledge of the marking rubric provided to you at the start of the semester?" A large majority of students (93%, 94%) considered the rubric to be at least somewhat useful, of whom just under half rated it as very useful.

Rubric useful?	spring 2020	autumn 2020	
<i>very much</i>	40%	45%	
<i>to some extent</i>	53%	49%	
<i>not at all</i>	7%	4%	
<i>no response</i>	-	-	

Relation of essay titles to learning goals: Students were asked: "To what extent do you think that the question titles you were set in the assessed essays reflected the learning goals you had been given?" Almost all students considered that essay questions were at least somewhat related to stated learning goals, of whom most rated them as very related.

Relation of essay titles to LGs	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>very much</i>	79%	43%	67%	58%
<i>to some extent</i>	15%	50%	33%	38%
<i>not very much</i>	2%	5%	0%	2%
<i>not at all</i>	0%	2%	0%	0%
<i>no answer</i>	-	--		2%

Transferable skills: In a new question, students were asked: "To what extent do you agree with this statement? "I feel that the short essay assessment method used this semester has benefited my skill in writing in a way that will be useful in the future." Responses were 49% *agree strongly*, 36% *agree somewhat*, 9% *neither agree nor disagree*, 7% *disagree somewhat*, and 0% *disagree strongly*. Therefore, a large majority of students (85%, 89%) considered the essay writing activity to have at least some long-term transferrable value, with about half of students agreeing *strongly*.

Transferable skills?	spring 2020	autumn 2020	
<i>agree strongly</i>	49%	47%	
<i>agree somewhat</i>	36%	42%	
<i>neither nor</i>	9%	8%	
<i>disagree somewhat</i>	7%	0%	
<i>disagree strongly</i>	0%	2%	
<i>no answer</i>	-	2%	

Concern that ungraded assessment might be detrimental to applying for exchange

semesters: Students were asked: “Are you concerned that ungraded course assessment might make it more difficult for you to apply successfully for an exchange semester in another country?” Although slightly over half responded *no*, with many unsure, a minority were concerned. Responses are similar to previous semesters.

Concern over lack of grades	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>yes</i>	3%	17%	16%	6%
<i>unsure</i>	32%	21%	27%	26%
<i>no</i>	62%	60%	56%	58%
<i>NA as an exchange student</i>	?	?	2%	8%
<i>no answer</i>	-	-	-	2%

Impact of ungraded assessment on work effort: Students were asked: “Do you think you put LESS or MORE **effort and hours of study** into your learning because the course was ungraded, compared to a graded course?” Similar minorities rated that they worked less or more, but over half reported it made no difference. Results are similar to previous semesters.

Effort and hours of study	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>less</i>	9%	14%	16%	9%
<i>no difference</i>	53%	74%	60%	66%
<i>more</i>	35%	12%	22%	15%
<i>NA as an exchange student</i>	?	?	2%	8%
<i>no response</i>	-	--		2%

Students were then asked: “Do you think your **knowledge and understanding of course material** benefitted or was worse because the course was ungraded, compared to a graded course?”. Only a small minority rated learning as worse, while almost all rated a benefit or no difference. Results are similar to previous semesters.

Knowledge and understanding	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>benefitted</i>	44%	45%	53%	45%
<i>no difference</i>	53%	40%	40%	51%
<i>worse</i>	0%	14%	7%	2%
<i>no response</i>	-	--		2%

A third question then asked: “To what extent do you agree with the following statement: Because the main lecture course was ungraded, I tried as far as possible to get through the course using knowledge I already had from previous courses.” On a 5-point scale, over half disagreed strongly, around a quarter disagreed somewhat, and very few agreed. These results are very similar to previous semesters.

Relied on previous knowledge	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>agree strongly</i>	0%	0%	2%	2%

<i>agree somewhat</i>	6%	5%	7%	4%
<i>neither agree nor disagree</i>	6%	14%	9%	6%
<i>disagree somewhat</i>	26%	24%	24%	17%
<i>disagree strongly</i>	59%	57%	56%	62%
<i>NA as an exchange student</i>	?	?	2%	8%

In summary, data are consistent with previous semesters in suggesting that the vast majority of students perceive lack of grading as beneficial or non-detrimental to learning. In addition, lack of grading is consistently rated as leading to similar or even more work effort, and only a small minority of students report trying to rely on previous course knowledge to shortcut through this course.

Free-text comments on essays: Students wrote mostly positive comments on the essays, especially about the individualised feedback and the transferrable skill they learned. Example comments were:

- *I really enjoyed how you set up this course as a whole, and how well informed you kept us all the way through. The essays were very helpful and motivated me to read and take notes thoroughly. I liked how clear you were on how we were evaluated, with the rubric for the essays and online quizzes.*
- *Likte svært godt at standard eksamensform vart bytta ut med essay. Eg har lest og jobba meir jamnt gjennom semesteret samanlikna med tidlegare grunna korleis faget har vorte lagt opp. I tillegg har eg opplevd å kunne fokusere i større grad på å forstå istaden for å hugse (memorisere) enorme mengdar pensum til ein skriftleg eksamen (for så å gløyme alt to dagar etterpå). Tommel opp for essays altså!*
- *I got my Essay 1 back to revise, and you had so many good arguments to why, and advice to make it better. I point this out because we rarely get this, which is so frustrating because we don't know what went wrong nor how to make it better. I thank you for this.*
- *Jeg opplevde tilbakemeldingene fra essay 1 som veldig nyttige, og synes det var bra jeg fikk muligheten til å revise. Synes dette istedenfor skoleeksamen var veldig nyttig og læringsrikt.*
- *I also appreciate that you have invested in helping us with other skills, such as writing. This has been important for me and is something I will use in further courses and life in general.*
- *Synes stilen og læringsutbyttet virker bra. Liker spesielt godt at vi får feedback noe som gjør oss bedre til å skrive. Det at det finnes tydelig kriterier for bestått/ikke bestått er UTROLIG BRA, noe andre fag virkelig burde begynne å ta innover seg.*
- *Å måtte skrive essay 1 på nytt ble en liten selvtillitsknekk, og jeg vet det gjaldt for flere. Mange på studiet har aldri før i sitt liv fått noe "ikke godkjent". Poenget er at jeg innrømmer at det var veldig god læring i det, og en sunn erfaring sett i etterkant.*
- *The essays have been a new challenge for me, but i feel that im leaving with new, valuable skills.*
- *I really enjoyed the marking rubric, and I think the style of writing that was demanded was right up my alley. It made sure that there was a clear structure and "rød tråd" the whole way through. I got good and informative feedback on both of*

my essays, however I missed some "in-text" specific comments on parts that were especially good, or could have been better.

- *I personally could understand and agree with Price's feedback and arguments to why I had to revise my essay 1. I learned a lot from this.*
- *Jeg ble overasket over hvor verdifulle tilbakemeldingene var for min læring. Det var også veldig nyttig å se tidligere problemstillinger og oppgaver.*
- *Det aller beste var muligheten for å få tilbakemelding og to sjanser. Da følte det mer som en læringsprosess og ikke bare en vurderingssituasjon.*
- *The feedback from essay 1 definitely helped me on essay 2*

Several students commented that it has been very beneficial and less stressful to have a whole day to write each essay at home, rather than the 2.5 hour classroom writing that was used prior to the pandemic lockdown. Example comments were:

- *I enjoyed the changed format where we got seven hours to write instead of two. I still had to revise all the themes, but it gave me a chance to further reflect on my text and focus on the writing in addition to the content.*
- *I think it was a good thing to have more than 2.5 hours to write the essay. In this way I felt that I was more able to express my knowledge, to reflect on the essay topic and to be aware of my style of writing than if I had been very stressed.*
- *I loved to have several hours! I think I would have learned much less if I had to sit in the classroom for just a couple of hours - it would have been a lot more stressful*
- *The longer timeframe for the essay really helped as I could do stretches and take pauses from the writing. Also, I am a slow writer and I like to go over my writings at least 3 times before I submit them.*
- *Jeg er veldig glad for at vi fikk lengre tid på essay-skrivingen, det var nødvendig for å kunne vise hva jeg har lært og lage en god oppgave. Jeg håper at fremtidige studenter som tar dette emnet også får lengre tid på essayet og at det kan fortsette som en hjemmeoppgave.*

One student suggested more practice essays would be useful: *"Challenging, but rewarding. Would like more practice-stuff before essay 1. Might for example do discussion cafe every second week, and an essay-practice-task the other week?"*

One student suggested a longer word limit would have benefitted the learning outcome, while others specifically praised the short length of the essays.

- *"Ellers er jeg veldig glad for at vi får tilbakemeldinger og mulighet til å skrive om essayet og få det vurdert på nytt. Det er en fantastisk lærerik erfaring for oss som studenter som vi ellers ikke har opplevd i løpet av studietiden. Tusen takk!"*
- *Likte at vi skrev korte oppgaver. Veldig ofte pådette studiet har vi skrevet laange oppgaver hvor det blir mye "skrivning rundt grøten". Likte mye bedre et kort format hvor man kan vise mye kunnskap uten for mye vas.*

There were, however, a few students with a more negative experience of the essays.

- *Syntes det var for strenge krav. Selvom jeg bestod begge essayene på første runde, syntes jeg det er veldig urettferdig at så mange måtte ta de opp i en veldig vanskelig tid. Alle har gjort sitt beste i år. Og tviler på læringsutbytte er større ved å ta opp. Det holder med å si hva som burde gjøres om. Det har bare tilført enda et stressелеment i en krevende situasjon, og gått utover andre deler av faget og/eller andre fag . Og videre ført til at man blir demotivert.*
- *Likevel syntes jeg det har vært altfor høye krav og altfor stort pensum. Det har vært utrolig mye jobb med det faget, som gjerne har gått ut over andre fag og gjøremål. I forhold til essay så syntes jeg at det var for strenge krav, spesielt når vi ikke har hatt samme mulighet til å ha workshops og til å stille spørsmål osv. Selvom Mark har gjort det beste ut av situasjonen, og veldig imøtekommende i forhold til spørsmål på Mail og alternativer på zoom. Men det har vært et utrolig krevende semester for alle. Dette gjelder både i forhold til studie, men også en krevde situasjon på alle plan i livet. Dermed syntes jeg kravene i forhold til godkjenning av essay og har vært for høye. Syntes ikke det har vært rettferdig for de som har måtte tatt opp essayene. Dette har vært et krevde semester, ikke bare i forhold til studie, men på alle plan i livet. Derfor burde man tatt hensyn til dette.*
- *My biggest fad is that there was a LOT of obligatory activities to do in this course, not representative to the amount of points we get for the course. I would prefer just having an exam one day, and get it over with, instead of countless hours spent at (especially) the multiple choice tests.*

Obligatory online practice of an essay with online peer assessment: The majority of students reported that it had been to at least some extent useful to write a practice essay, to peer review other essays, and to receive peer reviews. Perceived value of this exercise was similar to spring 2019 and much more positive than autumn 2019 data.

Useful to write practice essay	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Very useful</i>	27%	19%	51%	45%
<i>Somewhat useful</i>	61%	43%	36%	47%
<i>Not very useful</i>	12%	36%	11%	6%
<i>No answer</i>	-	-	2%	2%

Useful to make peer reviews	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Very useful</i>	30%	10%	44%	32%
<i>Somewhat useful</i>	42%	45%	42%	45%
<i>Not very useful</i>	27%	43%	13%	21%
<i>No answer</i>	-	-	-	2%

Useful to receive peer reviews	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Very useful</i>	24%	2%	18%	13%
<i>Somewhat useful</i>	45%	36%	53%	47%
<i>Not very useful</i>	30%	60%	29%	38%
<i>No answer</i>	-	-	-	2%

Assessment of the multiple choice test: This test was introduced to encourage students to cover the entire syllabus properly. The large majority rated the difficulty of the test to be “*about right*”, with larger minorities rating it as “*too easy*” than “*too difficult*”. Ratings did not differ between the last 2 semesters despite increasing the pass level and decreasing time available to perform the test. This suggests the latest version of the test should be maintained.

Difficulty level of MC test	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Too easy</i>	0%	2%	16%	15%
<i>About right</i>	91%	67%	80%	75%
<i>Too difficult</i>	9%	31%	4%	8%
<i>No response</i>	-	-	-	2%

Asked: “What was the effect of knowing that you would have a multiple-choice test on the amount of course syllabus that you studied?”, most rated that “It encouraged me to cover more of the syllabus” and only a small minority claimed it encouraged less study. In addition, when asked: “What was the effect of knowing that you would have a multiple choice test on the overall quality of what you learned on the course?”, over half rated that “In retrospect, I think it benefitted my overall learning.”, while only a small minority claimed it had a negative impact on learning. Results are fairly similar across semesters although this semester’s ratings were more positive than autumn 2019 but close to spring 2019.

Effect of knowing there would be test	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Covered more of syllabus</i>	79%	57%	73%	57%
<i>Made no difference</i>	21%	40%	27%	36%
<i>Covered less of syllabus</i>	0%	2%	0%	6%
<i>No response</i>				2%

Effect of knowing there would be test	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Benefitted overall learning</i>	65%	45%	58%	62%
<i>No difference</i>	26%	43%	36%	28%
<i>Negative for overall learning</i>	6%	12%	7%	8%
<i>No response</i>				2%

Students were also asked: “This semester we tried a new approach to the multiple-choice test, by asking each student to generate a question that might be included in the test. As a class activity, how useful was this for your learning?”. Most students rated this as either *very useful* or *somewhat useful*. This adaptation was therefore successful for most students.

Generating own questions	spring 2020	autumn 2020	
<i>Very useful</i>	40%	34%	
<i>Somewhat useful</i>	44%	40%	
<i>Not very useful</i>	11%	17%	
<i>Waste of time</i>	4%	8%	
<i>No response</i>	-	-	

In free-text comments, the final multiple-choice test was described by most students as being easy, and more of an end-goal to motivate taking the quizzes than a learning experience in itself.

- *I think the short tests were more beneficial for my learning than the final one since the former really made me reflect on the topic while I already knew all the answers by heart when completing the latter. However, knowing that I'd have to take the final test did force me to take the short ones multiple times in order to remember the right answers.*
- *Med tanke på den edelige MCQ-quizen var del-quizene nyttige. Utenom dette handlet det mer om å huske hva som var rett svar enn å faktisk ta til meg det som sto der for min del. F.eks, etter å ha gjort samme quiz noen ganger husket jeg at "multiplexing" var rett svar uten å lese hverken spørsmålet eller de andre alternativene.*

Asking students to generate some of the MC questions themselves was considered useful by some, but not others.

- *Jeg synes det var veldig kjekt at vi fikk lov til å være med å lage spørsmål! Det fikk meg til å tenke igjennom kursmateriale enda en gang og hva som var viktigst at vi husket fra kurset. Jeg synes også det var hjelpsomt å kunne lese igjennom spørsmålet til resten av klassen får MCQen, da fikk jeg nok en påminnelse om hva som var relevant i faget og viktigst å lære seg. Alt i alt er jeg veldig fornøyd med hvordan MCQen ble gjennomført.*

11. Detailed results of evaluation of shift to online learning

Various questions aimed to evaluate student reaction to the shift towards online learning that was partly pre-planned and partly forced by the pandemic. The spring semester included some classroom teaching, while the autumn semester contained none.

Asked "How did the shift to complete online learning affect your overall **learning outcome** from this course?", a slight majority in each semester responded that they learned more or that it made no difference.

Effect on learning	spring 2020	autumn 2020	
<i>Learned more</i>	31%	43%	
<i>No difference</i>	27%	36%	
<i>Learned less</i>	42%	19%	
<i>No response</i>	-	2%	

Asked "How did the shift to complete online learning affect your overall **enjoyment** of the course?", about half rated that they enjoyed it more or that it made no difference.

Effect on enjoyment	spring 2020	autumn 2020	
<i>Enjoyed more</i>	18%	25%	
<i>No difference</i>	29%	32%	
<i>Enjoyed less</i>	53%	42%	
<i>No response</i>	-	2%	

Asked "Based on your experience from this semester, which of the following options would you prefer for future course that, like this one, contained a lot of theoretical learning?", students chose as follows among several options:

Spring semester...

- 4% - I would choose for everything to be online.
- 49% - I would choose for most activities, except some classroom workshops, to be online.
- 42% - I would choose for a lot less of the learning to be online.
- 2% - I would choose for little or no learning to be conducted online
- 2% - No response

Autumn semester...

- 19% - I would choose for everything to be online.
- 51% - I would choose for most activities, except some classroom workshops, to be online.
- 23% - I would choose for a lot less of the learning to be online.
- 6% - I would choose for little or no learning to be conducted online
- 2% - No response

Free text comments about online learning indicated that it had clear benefits for some students.

- *For meg har det vore fantastisk at undervisninga har vore digital. Eg har lært mykje, jobba jamnt og trutt og opplevd auka trivsel på generell basis. Det har gåve meg meir fleksibilitet i kvardagen slik at eg har fått meir tid til andre ting som betyr mykje for meg og er viktig- som familie og tid ute i fjellet. Eg føler meg relativt einsom i å føretrekke online undervisning då inntrykket mitt er at dei fleste studentar har eit behov for å tilbringa tid på fakultet saman med andre studentar. For meg er det motsett. Sjølv med online aktivitet har eg funne tid til venane mine på kullet og me har gjennomgåande hatt god kontakt både om faglege og utanomfaglege tema. Konklusjon- online undervisning har for meg utelukkande vore positivt og eg nærast kvir meg til å gå tilbake til "vanleg" undervisning. Det vil ta frå meg mykje av fridommen og fleksibiliteten i kvardagen. Samstundes som at live- førelesing gjer meg lite utbytte då eg ikkje har anledning til å spole tilbake for å ta gode notatar og forstå innhaldet undervegs.*
- *Jeg har satt pris på å slippe å bruke tid på å komme meg til og fra campus, og muligheten til å tilpasse arbeidstiden min ved at lærematerialet er tilgjengelig hele tiden. Det er gode fordeler! Men det er litt mindre engasjerende å sitte hjemme alene. Og mindre forpliktende.*

For others, the experience was isolating and negative.

- *... det har ingenting med kvaliteten på online-undervisningen å gjøre siden jeg syntes denne var veldig fin. Det går mer ut på min preferanse om å kunne omgås folk i klassen, overfor å se videoer alene.*
- *Likte veldig godt opplegget tilknyttet Mark sin modul, men savnet generelt mer fysisk oppmøte da det å møte folk på skolen er en viktig del av det sosiale hverdagslivet - men forståelig at det måtte bli sånn pga den pågående pandemien.*
- *Having to sit in my own living room to work the whole day is really taxing, compared to when we get to meet up physically. My study sessions have been reduced to just a couple of hours each day, cause I get so tired of having to focus when everything is happening on the same screen in the same chair as I spend my leisure time. The Zoom meetings helped a little, because of the slight experience of social interaction. Pre-recorded video lectures are the most challenging, because they aren't interactive at all. There is no feeling of responsibility to pay attention in the same way as when it's happening live.*

Others described both advantages and disadvantages.

- *Det er det tveegget sverd. Fordeler og ulemper. Men dette semesteret har vært for digitalt. LITT mer fysisk oppmøte kunne gjort en stor forskjell. For det digitale opplegget har stort sett vært av høy kvalitet!*

Some did not like online teaching in general but found the quality to good.

- *Jeg liker ikke online-undervisning, men synes du definitivt gjorde det beste ut av det.*

One student commented on how the lack of social interaction due to the pandemic had reduced the tolerance for online teaching:

- *Synes det har vært kjedelig å være hjemme fordi jeg er over gjennomsnittet sosial, men selve kurset synes jeg har vært veldig bra på nettet. Hvis det ikke hadde vært korona tror jeg uansett jeg ville satt pris på at det var online forelesninger, men nå siden jeg ikke har fått deltatt på andre sosiale sammenkomster heller har det vært ekstra kjedelig med hjemmeskole i tillegg. Veldig fornøyd med hvordan det har vært på nettet.*

The online format of lectures was mostly popular and perceived to be beneficial for learning.

- *Jeg likte at forelesningene var tilgjengelige online, da det lot meg ta det i mitt eget tempo. Ofte faller jeg av i løpet av en normal forelesning på skolen, mens online hadde jeg muligheten til å spole og pause som det passet meg. Læringsutbyttet ble dermed bedre.*
- *I actually found it very nice that the module was mostly online, because then I can focus better, and also have another look at the videos if I needed to. Plus listen to them when it was the most suitable time for me. And also be able to pause the videos was nice!*
- *Jeg likte at jeg kunne se forelesninger flere ganger eller gå tilbake hvis jeg ikke forstod noe, Det gjorde at jeg lærte mye mer av online forelesninger i forhold til tradisjonelle forelesninger.*
- *I think it's been really great that the different lectures have all been available for us online, so that we can listen to them in our own time and take as detailed notes as possible. I find this to be more difficult in live lectures, especially on Zoom, so I think it's very good that they are all prerecorded and available for us to listen to whenever we want.*

Students were asked to comment on the "... kinds of online lectures you preferred or disliked, and why? For example, do you prefer several short mini-lectures or a few longer ones? How could we make them better?" Most students claimed to prefer shorter lectures, and many commented that the older recordings of online lectures were too long. However, opinion varied considerably as to the definition of "short"; this ranged from about 10 minutes to 30 minutes, with 20 minutes as an approximate average. Some students did not like very short lectures as these were too short to get to grips with the material, and made for too many breaks and less overall organisation. Some did not mind as long as they could pause the video when they wanted. Some described preferring recordings of live lectures while others described a preference for purpose-made online lectures. Reasons for preferring the latter included better sound quality and the possibility to playback at faster speed. Some commented on the advantages and disadvantages of online lectures.

- *I liked that the videos had different length, so I could choose what I felt like watching and for how long. For learning purposes I prefer the shorter (20-30 min) recordings of*

your powerpoint, where the entire screen is dedicated to your powerpoint and is not a recorded lecture. The length has to do with attention span when alone. However, for social purposes and a sense of belonging I prefer physical lectures. Also, I think the physical lectures are better suited for big thinking and discussion. In summary: short online lectures for learning and longer physical lectures for ""big picture"" thinking and social meetups. "

Some students commented that written transcripts of online lectures were very useful, when available. Some comments suggested this might be particularly useful for students who struggled with the level of the course, perhaps partly as it is delivered in English. Students also appreciated the transcriptions of new video lectures in the last part of the course, taught by Anita Lill Hansen.

- *I REALLY liked how there was transcripts to follow to the videos on consciousness. Made it very easy to follow, and more effective as I didnt feel the need to take extra notes. This might be more work for Mark however, but made it incredibly more easy to understand (in just one go, didnt have to see the videos many times)*
- *Det var og et fint supplement da du la ut transkriberingene av videoene dine. Det gjorde det veldig mye lettere å følge med og få med seg alt*
- *Jeg likte også VELDIG godt at det var transkripter for noen av videoene hans. Det var veldig mye lettere for meg å følge med og forstå hva han sa når jeg kunne lese det! Det hadde vær veldig fint om dette var tilfellet for alle videoene. Jeg endte opp med å bruke flere dager per video for selv å transkribere. Dette var veldig tungt og kjedelig og bidro at jeg følte at jeg fikk et dårligere læringsutbytte.*
- *.... veldig nyttig med transcripts som var tilgjengelig på noen av videoene i bevissthets modulen. Gjerne mer av det!*
- *I really liked that there were transcripts of consciousness lectures provided, it made it much easier to digest the information.*
- *Jeg likte også svært godt at det var inkludert manuskript på forelesningene om bevissthet - dette gjorde det noe enklere å forstå dette kompliserte temaet. Å inkludere manuskript på flere av de andre temaene hadde nok også hjulpet min personlige læring, så dette er noe man kanskje kan inkludere i fremtiden.*
- *Likte også svært godt transkriberte førelesingar! Mykje meir tidsbesparande og enkelt å lese gjennom transkripsjonen- samt enklare å skriva notatar til samanlikna med berre lyd på pp. [Hansen's module].*

12. Detailed results of evaluation of semester projects

12.1 Background

Students conduct a research project which can be theoretical (literature-based) or empirical (involving data collection and/or analysis). The project is presented as a maximum 6000 word paper, with students usually working in groups of 3-4. Students also present their work at an obligatory project conference day. The work is credited with 6 study points. Assessment is on a pass/fail basis and is ungraded.

The format of the end-of-semester project conference was adapted to run online as a Zoom meeting. Project groups presented their projects to each other using Powerpoint presentations on Zoom.

This part of the course was closed to international students the spring semester.

In the spring semester, only 2/13 projects were empirical. In the autumn semester, 26% of students completed an empirical project or worked as RAs.

Evaluation is based on several multiple choice questions which tapped the overall learning experience of the students, project allocation, supervision experience, group cohesion etc. There were also 2 free-text questions probing for further clarification of problems in either group cohesion or with projects more generally.

12.2 Evaluation data

Was the project a useful learning experience?: Students were asked: "Have you found your semester project (emneoppgave) to be a useful learning experience overall?"

Useful learning experience?	spring 2019	autumn 2019	spring 2020	autumn 2020
Yes	85%	57%	71%	58%
Unsure	9%	29%	24%	19%
No	2%	14%	2%	11%
No response	-	-	-	11%

Range of projects on offer: Students were asked: "Did the range of available project themes include projects themes that interested you?"

Interesting themes?	spring 2019	autumn 2019	spring 2020	autumn 2020
Yes	91%	81%	80%	79%
Unsure	2%	10%	13%	8%
No	2%	10%	4%	4%

<i>No response</i>	-	-	-	9%
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Allocation of projects: Students were asked: “Are you satisfied with the way the projects were allocated to each student group?”

Allocation?	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Yes</i>	76%	57%	58%	64%
<i>Neither nor</i>	21%	29%	27%	17%
<i>No</i>	0%	4%	13%	9%
<i>No response</i>	-	-	-	9%

Interest of project: Students were asked: “Have you found your own project to be interesting?”

Own project interesting?	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Yes</i>	91%	64%	53%	60%
<i>Unsure</i>	2%	14%	18%	9%
<i>No</i>	2%	21%	24%	21%
<i>No response</i>	-	-	-	9%

Supervision quality: Students rated “Are you satisfied with the quality of supervision you were given for your project?” using a 5-point scale.

Good supervision?	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Very satisfied</i>	1%	36%	42%	43%
<i>Satisfied</i>	32%	29%	36%	13%
<i>Neither nor</i>	6%	31%	13%	13%
<i>Dissatisfied</i>	15%	2%	7%	15%
<i>Very dissatisfied</i>	3%	2%	0%	6%
<i>No response</i>	-	-	-	9%

Student project group cohesion: Students were asked: “Did your project group work well together in terms of communication and division of work load?”

Group cohesion?	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Yes</i>	65%	69%	76%	77%
<i>Unsure</i>	32%	5%	9%	9%
<i>No</i>	13%	21%	0%	4%
<i>No response</i>	-	-	-	9%

Student project conference: Students were asked: “Has it been a useful learning experience for you to prepare and present your project at the project conference?” and “Has it been a

useful learning experience for you to listen to other students' projects at the project conference?"

Conference presentation useful?	spring 2019	autumn 2019	spring 2020	autumn 2020
Yes	76%	68%	53%	45%
Neither nor	15%	29%	29%	28%
No	6%	24%	16%	17%
No response	-	-	-	9%

Useful to listen to others?	spring 2019	autumn 2019	spring 2020	autumn 2020
Yes	65%	52%	64%	30%
Neither nor	29%	33%	18%	42%
No	2%	14%	16%	19%
No response	-	-	-	9%

Free-text comments: Students varied widely in terms of their experience of group cohesion and work sharing. While some described a productive group atmosphere in which students learned from each other, some students described groups in which they had had to do most of the work which was stressful and unfair in terms of workload. One student suggested some formal method of within group evaluation to address this. Even if this kind of situation occurs in a minority of groups, it is clearly a source of stress and frustration when it does occur.

- *My group was absolutely exceptional! Couldn't have asked for a better group! We're actually having dinner together in January to celebrate that we passed!*
- *Prosjektet gikk egentlig veldig greit for vår del. Vi møtte ikke på noen problemer.*
- *Jeg opplevde lite engasjement i gruppen minn og følte jeg måtte ta alt initiativ og "dra" gruppa i gang. Jeg tror jeg stod for mer enn 50% av arbeidet, selv om vi var 4 på gruppa.*

In the autumn semester there were several comments by students who felt their supervision had been inadequate, with too little feedback from supervisors and unanswered questions. Some felt that the supervision had deviated from the general supervision guidelines that they had been led to expect in the course introduction. One student complained that the supervisor was unfamiliar with the expected format for a research assistant report, and also that the group had been given data to process without proper involvement in the project and explanation of the data.

- *Hvis målet er at en som forskningsassistent skal få innblikk i metode og fremgangsmåte for forskning, må nesten gruppen få delta i dette. Slik det ble gjennomført nå har min gruppe bare fått servert en hel del analyser uten noen forklaring på hvorfor eller hvordan dette har blitt utført og hva det betyr.*

While some students were very happy with the the way projects were assigned to students, others felt they had ended up with a project that they were not interested in.

Reaction to the project conference was varied. Some did not find it useful at all, while others claimed to learn a lot and described it as the best project conference they had been to.

Several students wrote more general critiques about the need, and learning benefits, of doing emneoppgave projects each semester.

- *Synst vidare det er i overkant å skrive ei oppgåve kvart semester. Då det utgjer ein så liten prosentdel av obligatorisk aktivitet, så vert det enkelt å nedprioritere og det vert noko som ein berre må gjennom utan at ein legg for mykje innsats i det.*
- *Det har vært litt for mye arbeidsmengde på kort tid dette semesteret. Og jeg synes emneoppgaven særlig krevde ressurser vekk fra temaet høyere kognisjon, som var så kort i utgangspunktet. Det gikk litt for i ett siden essay 1, med frister og oppgaver og innleveringer og tilbakemeldinger på emneoppgave og essay 2 på altfor begrenset tid. Jeg trenger ikke emneoppgave hvert semester!*
- *We should do less semester projects imho, and rather ensure that the ones we do are super relevant for the course in question or toward the line of specialization one wants to pursue. As it is there is an over-emphasis on everybody becoming researchers, which is more than a bit forced as the projects are variable in quality as is the level of supervision - ranging from very good to spectacularly aka*

13. Detailed results of evaluation for Mark Price's module

13.1 General appraisal of online interface for this part of the course

New questions tapped student satisfaction with the extensively reworked online format for this part of the course.

- A general question first asked: "The online interface for this part of the course was intended to provide a large amount of learning material for you in an accessible and easy-to-navigate manner, with variation in learning format, and with the opportunity to study some topics in more detail if you wanted to. For you, how successfully was this aim achieved?" The large majority of students rated this as *successful*, almost none as unsuccessful, and with a slight improvement in mean rating over the 2 semesters.

General online interface	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Successful</i>	-	-	73%	89%
<i>Somewhere in between</i>	-	-	2%	11%
<i>Unsuccessful</i>	-	-	2%	0%

- A second question asked: "The online interface for this part of the course, and the timetable and design of obligatory activities, were intended to strike a good balance between helping you keep up with the course schedule, and maintaining flexibility in your learning timetable. For you, how successfully was this aim achieved?" The large majority of students rated this as *successful*, almost none as unsuccessful, with a slight decrease in mean rating over the 2 semesters.

Structure & flexibility	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Successful</i>	-	-	84%	74%
<i>Somewhere in between</i>	-	-	6%	25%
<i>Unsuccessful</i>	-	-	0%	2%

13.2 Viewing of online lectures

For the following data, it should be noted that the proportion of pre-recorded online lectures had been substantially increased in the spring semester, compared to previous semesters, and was totally online in the autumn semester.

- Most students viewed all available lectures.

Proportion of all lectures viewed	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>All</i>	91%	74%	78%	87%
<i>Most</i>	9%	17%	20%	13%
<i>Just a few</i>	0%	5%	2%	0%
<i>None</i>	0%	2%	0%	0%

- Nearly all students viewed the entirety of the online lectures that they viewed, of whom more than half reviewed some parts of the lecture again. Only a very small minority reported only viewing some of the lectures, and none reported viewing hardly any of the lecture.

Proportion of each lecture viewed	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>View the whole lecture one time only</i>	39%	17%	24%	42%
<i>View only some of the lecture</i>	0%	2%	7%	6%
<i>View hardly any of the lecture</i>	0%	0%	0%	0%
<i>View the whole lecture at least once, and review some parts at least one more time</i>	58%	76%	69%	53%
<i>Not applicable: I have not viewed any of those lectures</i>	0%	0%	0%	0%

- For the question, "Which of the following describe aspects of your behaviour while watching the online videos (select all that applied to you)?", results are tabulated below. A large majority of students reported taking notes while watching. A large majority reported rewinding to review parts of the content, and pausing the video to watch parts later, while a minority also reporting skipping ahead during parts they already knew; this indicates that many students used the flexibility of the online format to review, pause or forward lectures. Only about half of students reported giving the online lectures their undivided attention, and a minority also reported multitasking during viewing. Skipping ahead due to lectures being too long was reported by a minority, albeit a very small one.

Viewing behaviour	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Took notes while watching</i>	-	78%	87%	85%
<i>Rewound the video to review parts of the content</i>	-	76%	80%	75%
<i>Paused the video and resumed watching it later</i>	-	59%	67%	68%
<i>Gave the video my undivided attention</i>	-	49%	51%	57%
<i>Skipped ahead during some parts that I already knew</i>	-	12%	9%	8%
<i>Watched it while doing something else unrelated to this course</i>	-	7%	9%	13%
<i>Skipped ahead during some parts because the video was too long</i>	-	5%	7%	8%
<i>Not applicable: I have not viewed any of those lectures</i>	-	2%	0%	0%

- Asked, "Did you usually manage to study the lectures by the suggested deadline on your course planner?", the large majority of students responded yes. Interestingly, self-reported ability to keep up with the schedule was at best only marginally greater than previous semesters where the course had to be followed over a much shorter and more intensive period.

Keeping up with schedule	spring 2019	autumn 2019	spring 2020	autumn 2020
Yes	71%	71%	84%	85%
No	21%	26%	16%	15%

- Asked, "Which of the following best describes your experience of trying to access the online lectures?", many students reported technical problems but these were almost always overcome. Although the increase in technical problems, compared to previous semesters, might be related to the greater use of online teaching, a more likely reason was issues with Mitt UiB and Kaltura which were beyond the control of teachers. An example is Kaltura videos not playing due to downtime or technical problems with the platform.

Technical problems	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>I had no technical problems in opening and playing the lectures</i>	73%	55%	56%	26%
<i>I had some problems but was able to overcome them</i>	27%	28%	44%	70%
<i>I had problems which discouraged or prevented me from viewing some or all of the lectures</i>	0%	5%	0%	4%

- Asked, "Were the online lectures clear to understand in terms of their content?", most students rated the lectures as clear or very clear. However, a small minority found them unclear.

Clarity of online lectures	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Very clear</i>	53%	24%	31%	36%
<i>Clear</i>	42%	57%	60%	57%
<i>Unclear</i>	5%	14%	9%	8%
<i>Very unclear</i>	0%	2%	0%	0%

- Asked whether online lectures were mostly interesting or not most students rated them as interesting or very interesting, but a minority rated them as uninteresting.

Interest of online lectures	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Very interesting</i>	24%	7%	11%	15%
<i>Interesting</i>	73%	62%	73%	66%
<i>Uninteresting</i>	2%	24%	16%	15%
<i>Very uninteresting</i>	0%	2%	0%	2%
<i>No answer</i>	-	--	-	2%

- Asked, "From the point of view of your previous knowledge of cognitive psychology, how did you find the level of the online lectures?", a few students rated lectures as too advanced, but the large majority rated them as about right in level.

Difficulty level of lectures	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Too advanced</i>	18%	36%	13%	17%
<i>About right</i>	82%	60%	84%	83%
<i>Too easy</i>	0%	2%	2%	0%

- In response to the question "In terms of your **understanding and overall learning experience**, do you usually find the online lectures or the live lectures most useful?", a clear majority rated the online lectures as good as or better than live lectures, with more students showing a preference for online lectures than for live lectures. The popularity of the online lectures appeared much higher than in previous semesters. This might reflect shifting attitudes, lack of comparison with the same teacher giving live lectures, or improvement in the quality of the online lectures.

Usefulness of lectures	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>online more useful</i>	30%	19%	44%	62%
<i>similar</i>	33%	36%	29%	23%
<i>live more useful</i>	36%	38%	27%	13%
<i>cannot compare</i>	0%	2%	0%	2%

- For the question “In terms of your **enjoyment**, do you usually prefer viewing the online lectures or the live lectures?”, more students gave a preference for live than online lectures. These ratings are the opposite of students' ratings for the relative learning outcomes of online versus live lectures. However, in the autumn semester, which was completely online, about as many students rated the online enjoyability as better or similar, compared to the number who rated online enjoyability as less.

Enjoyment of lectures	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>online more enjoyable</i>	12%	14%	22%	30%
<i>similar</i>	42%	36%	18%	19%
<i>live more enjoyable</i>	45%	45%	60%	47%
<i>cannot compare</i>	0%	2%	0%	4%

- A new question tapped the introduction of guided questions that accompanied lectures. The question was phrased, “Many online lectures came with a list of questions to guide your viewing and revision. How useful did you find these questions for your learning?”. Most students (73% and 89%) rated these as useful, with around a third of students rating them as *very* useful. These entirely optional questions are therefore a positive addition to most students' learning support, at no cost for students who do not find them useful.

Guided questions useful?	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Very useful</i>	-	-	33%	36%
<i>Somewhat useful</i>	-	-	40%	53%
<i>Not very useful</i>	-	-	24%	8%
<i>Waste of time</i>	-	-	2%	2%
<i>No response</i>	-	-	-	2%

- Asked whether use of online lectures should be expanded or reduced, 58% thought the level was *about right how it is at the moment*, 22% thought it should be reduced and 20% increased. This question was not asked in the autumn semester when all teaching was online. These ratings are remarkably constant despite the big increase in online lectures from spring 2019 to spring 2020.

Expand or reduce online lectures?	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Increase</i>	21%	5%	20%	NA
<i>About right</i>	64%	57%	58%	NA
<i>Decrease</i>	15%	36%	22%	NA

13.3 Using videos of live lectures that students have not attended

- Students' were very varied in their judgement of lectures that were delivered as video-recordings of live lecture made in another semester. Students were able to tick more than 1 of the options in the table below. Most commonly, students had no strong opinion, but there were many more students who preferred real live lectures or online lectures than preferred this format. This suggests that, in the longer term, recordings of live lectures should be progressively replaced by dedicated online lectures.

Recordings of previous live lectures OK?	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>They were better than live lectures</i>	3%	12%	9%	13%
<i>They were better than the normal online lectures</i>	9%	7%	9%	9%
<i>They were worse than live lectures</i>	-	-	24%	21%
<i>They were worse than normal online lectures</i>	27%	34%	31%	32%
<i>No strong opinion</i>	42%	41%	42%	45%
<i>I did not view them</i>	-	-	-	4%

13.4 Obligatory online quizzes

- Asked whether the obligatory online quizzes were "helpful in making you **keep up with the schedule of lectures?**", the large majority of students agreed, with around half of students rating this as *very useful*.

Quizzes help to keep up?	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Yes, very much</i>	64%	31%	58%	49%
<i>To some extent</i>	27%	52%	31%	42%
<i>Not very helpful</i>	?	?	7%	4%
<i>Not at all. They actually impaired my ability to keep up with the lectures</i>	?	?	4%	6%

- Asked whether the obligatory online quizzes were "helpful for your **learning, understanding and retention** of lecture materials?", the large majority of students agreed, with at least a quarter of students rating this as *very useful*.

Quizzes help learning?	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Yes, very much</i>	64%	19%	44%	25%
<i>To some extent</i>	24%	64%	44%	62%
<i>Not very helpful</i>	?	?	11%	11%
<i>Not at all. They actually impaired my learning</i>	?	?	0%	2%

- The difficulty level of the obligatory online lectures was rated as *about right* by the large majority of students.

Quizzes level?	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Too advanced</i>	9%	26%	9%	11%
<i>About right</i>	91%	69%	89%	89%
<i>Too basic</i>	?	?	2%	0%

- Asked "Which of the following strategies did you use to pass the online quizzes? (Tick off as many strategies as you used, and please be honest. Remember, this survey is anonymous.)", most students claimed to answer at least some questions on their own, while a few claimed to answer at least some questions in groups. Proportion of students claiming group collaboration has dropped markedly from 2019, especially in 2020, probably reflecting social isolation during the COVID pandemic. Almost no students claimed to obtain answers from peers or get somebody else to answer for them.

Quizzes strategy?	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>I answered the questions on my own without discussion or help from other students.</i>	76%	73%	96%	98%
<i>I answered the questions in a group with one or more other students.</i>	52%	46%	24%	9%
<i>I got the answers from other students.</i>	?	?	2%	0%
<i>I got somebody else to answer the questions for me.</i>	?	?	0%	0%

- Opinion was divided over whether the uses of obligatory online quizzes should be expanded. This question was only asked in the spring semester. While 33% were unsure, 19% said yes and 45% said no.
- Strikingly, around half of students thought, in retrospect, that the quizzes should have been obligatory rather than voluntary, with only a minority rating they should have been voluntary.

Quizzes should be obligatory?	spring 2019	autumn 2019	spring 2020	autumn 2020
<i>Obligatory</i>	67%	48%	56%	53%
<i>Unsure</i>	18%	26%	36%	25%
<i>Voluntary</i>	15%	24%	9%	23%

- In free-text comments, many students commented that the quizzes had been helpful for learning and timekeeping, and that they might not have done the quizzes if they had not been obligatory. Although several students commented that interleaving of old questions in successive quizzes had been useful, some suggested that it would have been even better to integrate new questions from previous themes rather than just repeating the same questions. Most comments supported the existing format for the quizzes, even if a small minority resented this extra workload and claimed no learning benefit. Most liked the ability to take the quizzes many times, although some students suggested limiting the number of times that each quiz could be taken in order to make it less easy to get through them without thinking too much. A few students commented that some quiz questions were too complex in their wording.
 - *Nice quizzes! They helped me understand what is important to learn and the questions were written in a way that facilitated deeper understanding. It was a clever touch with a bigger pool of questions and many of the same questions coming back in later quizzes. This made sure that I did not forget the previous themes, but instead tried to integrate everything into everything.*
 - *I think they were both helpful and fun.*
 - *I retrospectiv var quizzane ein grei måte å lære på.*
 - *I really liked the online quizzes. They were helpful to review what I had learned that week, and also in understanding what was important from the course.*
 - *To be honest, i would never have done the quizzes if they weren't obligatory. The fact that they are ungraded and that you can take them as many times as you want takes away enough of the pressure for it to be enjoyable, but if they weren't obligatory, i would never have learned as much as i did. Keep them as obligatory, but ungraded!*
 - *I ticked the "voluntary" box, but I am also sure that if it was voluntary I probably would not have prioritised to do them and my learning outcome would have been worse off. It made me keep up with the time schedule and "kept me on my toes".*
 - *Jeg synes disse var veldig laererike. Det var bra at de kom rett etter hvert tema slik at man forsatt husket noe og fikk anledning til å repetere.*
 - *It took a lot of pressure away because we could do it several times, and it was a great way to learn. I also feel that i remember a lot more from the course because i took the multiple choice tests several times.*
 - *I liked it, it made me repeat some of the points that I didn't really understand in the learning process, which made me aware of what I needed to read more about. However, some questions were phrased in a very advanced way, which made me sometimes just learn which alternative was right, and which was wrong (aka no other learning than recognition).*

- *Questions asking for NOT and LEAST should be reworded. The focus should be on learning what is correct, not write mind fuck questions to catch people out. If one wants more advanced questions than one could make like tier system for detailed questions and more conceptual questions.*
- *Spørsmålene er ofte såpass spesifikke og detaljert at det ikke alltid gjør at en husker svaret lenge etterpå. Jeg tror, for meg hvertfall, at de beste spørsmålene var dem som handlet om den mer generelle eller overordnede forståelsen av de ulike temaene.*

One disadvantage of the quizzes, for a minority of students, was that they were perceived as stressful and distracting because the student had not yet had the time to cover the material.

- *Når disse quizzene er obligatoriske og med tidsfrist og kommer i tillegg til alle de andre obligatoriske arbeidskravene opplevdes de mer stressende en nyttige, og jeg syns egentlig ikke de utgjorde noen forskjell for min læring.*

However, an important role of the quizzes is to encourage students to keep on track, which seems successful for the majority.

- *The quizzes helped me to stick to the schedule.*

One concern with the quizzes is that some students might abuse their teaching aims by sharing the answers to questions. One student commented, in the autumn 2021 semester:

- *I know that some students got the answers from earlier students from last semester/year...*

Probably there is no way to prevent this without developing much bigger question banks, but it could be raised as an issue with students during course introductions. It would still seem that many students, perhaps most, are working independently with the quizzes.

- *Likte måten jeg fikk repetert stoffet på gjennom å måtte lete i notatene mine etter svar på quizene.*

13.5 Use of discussion cafés

This was a new innovation for this year, intended to develop interaction between students, to support peer-based learning, and to support active rehearsal and application of what they learn in lectures. Students had to post open-text written answers to several questions (150-250 words). For each question, they also had to comment on at least 3 posts written by other students.

- Asked "To what extent was posting a answer on the Discussion Cafés useful for your own reflection and learning?", a large majority of students (91%-78%) rated that posting answers had been *very useful* or *somewhat useful* for their reflection and learning. However, a small minority rated this as *not very useful* or even as a *waste of time*.

Posting on discussion café useful for learning?	spring 2020	autumn 2020	
<i>Very useful</i>	29%	23%	
<i>Somewhat useful</i>	62%	55%	
<i>Not very useful</i>	4%	15%	
<i>Waste of time</i>	4%	8%	

- Asked "To what extent was making comments on other posts, and reading comments by other students, useful for your own learning?", only around half of students rated this as *very useful* or *somewhat useful* for their reflection and learning.

Reading and commenting on discussion café useful for learning?	spring 2020	autumn 2020	
<i>Very useful</i>	11%	6%	
<i>Somewhat useful</i>	38%	42%	
<i>Not very useful</i>	38%	28%	
<i>Waste of time</i>	13%	25%	

One student suggested that peer comments in the discussion cafés could be replaced with an interactive process whereby members of groups contributed incrementally to a structured overview of some topic (e.g., describe a theory; describe how to test it; explain overall context/why it matters).

- A further question asked: "To what extent do you agree that the Discussion Cafés were a successful way to help you keep engaged with the course and communicate with other students during this online part of the course?". On average, around half of students either *agreed strongly* or *agreed somewhat*, with a few neutral and a minority disagreeing. Ratings were slightly more negative in the autumn semester although the assignment was unchanged.

Discussion café supports engagement?	spring 2020	autumn 2020	
<i>Agree strongly</i>	22%	5%	
<i>Agree somewhat</i>	40%	42%	
<i>Neither nor</i>	18%	13%	
<i>Disagree somewhat</i>	13%	21%	
<i>Disagree strongly</i>	7%	9%	

13.6 Classroom workshops

- A previous workshop on top-down processing, which had previously received variable feedback, was removed from the course for this year in order to reduce workload for students.
- For spring and autumn semesters respectively, 15/7 students provided immediate feedback after the 4-hour mind-mapping workshop on attention which had to be run online this year. Based on feedback from the previous semester, key words used in the mindmap were now available to students before the workshop. Only 7%/0% rated it as *very useful*, 87%/57% rated it as *quite useful*, 7%/43% as *not very useful* and none as a *waste of time*. At the end-of-semester evaluation, 53%/42% of students reported attending. Of those who attended, 41%/9% rated it as *very useful*, 46%/50% as *somewhat useful*, and 13%/41% as *not very useful*. In the spring semester class, 16% reported not attending because they felt unprepared, 7% because they did not think it would be useful, and 24% for other reasons. In free-text comments, several students described frustration with the online format of this workshop, which was forced by the pandemic situation.
- The workshop on consciousness, in which students prepared and presented specialist topics to each other, and then engaged in an applied, *significant learning* exercise, was also run online. It was substantially modified from previous semesters and was also now obligatory. For spring and autumn workshops respectively, only 25/5 students gave immediate online feedback after the workshop, with 28%/40% rating it as *very useful* for their learning process, 60%/40% as *quite useful*, 12%/20% as *not that useful*, and none as a *waste of time*. In the end-of-semester evaluation, 7%/4% of students reported not attending (these students had exemptions for health reasons). 36%/26% rated that they attended and found it *very useful*, 44%/53% as *somewhat useful*, and 13%/17% as *not useful*. As 80%/79% of the class rated this workshop as very or somewhat useful, it can be considered at least partly successful, vindicating the move to make it an obligatory activity. In previous semesters, attendance had been very low.
- To obtain more detailed and perhaps more accurate information about the consciousness workshop, students in the autumn semester were also polled *during* the workshop, via the Zoom polling function. Questions and data were as follows:
 - 1) In terms of learning outcome, was it better/same/worse to present to each other online rather than in the classroom?
 - Better than classroom = 30%
 - Same = 51%
 - Worse than classroom = 19%
 - 2) Would it have been better to present to the whole class, and hear everybody's presentations [as opposed to exchanging ideas in groups containing only 4 topics]?
 - Better as it was = 58%
 - No strong view = 19%

- Better in class = 23%

3) Would it be useful for each group to present a short written summary to post online for the rest of the class?

- Yes = 72%
- No = 28%

4) How useful was it to research a specialist topic on consciousness and exchange findings with other students?

- Very useful = 34%
- Somewhat useful = 60%
- Not very useful = 8%
- Waste of time = 0%

5) How useful was it to work on the applied problem of criteria for consciousness in humans, animal and artificial systems?

- Very useful = 14%
- Somewhat useful = 47%
- Not very useful = 33%
- Waste of time = 6%

In summary, feedback from the whole class, during the workshop, indicates a majority of 81% of students who consider that the online workshop was as good or better than a classroom-based version. A majority of 77% rated that the format of presenting and sharing information with just a minority of groups was as good or better than trying to arrange for everybody to listen to all groups. A majority of 94 % rated that it had been *very* (34%) or *somewhat* (60%) *useful* to research a specialist topic on consciousness and exchange findings with other students. 8% rated this as *not very useful* and none rated it as *a waste of time*. There was less enthusiasm for the follow-up group exercise on criteria for consciousness in humans, animal and artificial systems; only 61% rated this as very (14%) or somewhat (47%) useful, 33% rated it as not very useful and 6% rated it as a waste of time. Finally, a majority of 72% endorsed the suggestion by the teacher that it would be useful for each group to post a written summary of their findings on the course website.

- Written feedback on the consciousness workshop was quite varied. Some students liked the format of only listening to a few of the other student groups, while others missed hearing all presentations. Some enjoyed the workshop in general while a minority did not find it useful to present or listen to others. Views on the second part of the workshop also varied. Some students provided detailed suggestions for how the task and format of this part of the workshop could have been much better specified, and these suggestions are much appreciated by the teachers. Other students appeared to enjoy the workshop as it was:
 - *Regarding the applied problem I feel it was useful as a start of a discussion. It could be helpful with a better (in lack of a better word) explanation of the task, as my group at least felt we did not quite understand the question or task, and got confused as we discussed back and forth.*

- *The workshop itself was rather long - I grew very tired after a few hours. Maybe it is possible to shorten it a bit.*
- *The problem we had to solve in groups was a very interesting one and I enjoyed discussing it. Overall, the workshop was interesting and I learned a lot.*
- *Debating the different types of consciousness within locked-in, non-human animals and robots was super fun! We all had so many similar yet different thoughts, and it was just a truly great way to finish off the whole workshop! Thankfully everybody in my group didn't doubt that animals are conscious, so that gives me hope for the further treatment of animals in the future.*

One exchange student described finding it very difficult to integrate with the Norwegian students to prepare this workshop beforehand. This is a problem that teachers need to be more aware of in future semesters, and proactively ensure that exchange students are integrated.

- Detailed feedback on an essay writing workshop was collected in the autumn semester but not the spring semester. 20 students provided immediate feedback after the workshop, of whom 60% rated it as *very useful*, 40% as *quite useful*, 0% as *not very useful* and 0% as a *waste of time*. At the end-of-semester evaluation, 79% of students reported attending. Of those who attended, 55% rated it as *very useful*, 40% as *somewhat useful*, and 5% as *not very useful*. Free-text comments about this workshop were mostly positive:
 - *Synes det var veldig oppklarende- fint å få nye innspill og forslag til tilnaeminger :)*
 - *I think this worked ok as an online activity, but I would prefer real life meetings. I think the breakout rooms in general work ok, but live discussions in small groups are so much better! It's easier for people to join the discussion with comments IRL, than in the online breakout rooms, so sometimes the discussion just dies, or one/two people dominate completely for the whole 5 minutes. That being said, I really liked the contents of the workshop. It was very good revision of some of the course material, but also reassuring to get a strategy that works for many essay questions. The form of the essay that you want is quite new to us, so giving us tools and examples of what you expect from us is beneficial for both parts. This way of working with the material from different angles and perspectives, linking it together in different ways, seeing the details and the big picture at the same time, and alternating between receiving and retrieving information is very effective and rewarding. It is also takes a lot of effort though! But this course would have been ten times more challenging if we had to just watch some lectures, read by our selves and pass a final exam. There is so much material and many complex concepts. So keep on doing what you do. We have to work really hard in this course, but I hope it pays off.*
 - *This workshop was hugely helpful. Both in terms of understanding the format you want us to use when writing the mandatory essays, but even more so as a way of understanding or summarizing key concepts in this module, how they relate and are interconnected. Aka as a means of both focusing on the trees and focusing on the forest. If anything, more of these types of workshops would be nice - for instance module for module, more so than the quizzes or discussion cafes.*

On the other hand, a minority found that the workshop left them feeling overwhelmed because they realised their grasp of the syllabus was not as good as they had thought. Although stressful, this could still be considered to serve a useful pedagogic aim. Future workshops of this kind could include proactively advice for students falling into this category.

- *I think the workshop definitely was useful, but I got to be honest and say that it made me pretty stressed about the essays because the whole topic was quite difficult to understand, I thought I had an okay grasp of the topic and now I definitely don't feel that way.*

13.7 Relative contributions of different learning formats to students' self-rated learning outcome

A series of questions tapped students' evaluation of the relative learning outcomes of the various teaching formats used over this teaching module. For each format, students were asked: "In terms of learning outcome, [*teaching format X*] were". They then rated the usefulness of the format on a 5-point scale as summarised below. Data from spring 2019, autumn 2019, spring 2020 and autumn 2020, are given in sequence in each table cell. Numbers are percentages of students giving each rating. The last 2 "pandemic" semesters, in which the course had a new online interface and was shifted towards a completely or almost completely online format, and are shaded red. *NA* is used where an activity is *not applicable* to that semester; e.g., live lectures in autumn 2020. *NA* is also used in relation to replacement of lecture summaries by guided questions in spring 2020.

	<i>very useful</i>	<i>somewhat useful</i>	<i>not very useful</i>	<i>completely unhelpful</i>	<i>did not use at all</i>
live lectures	79, 43, 20, NA	21, 45, 67, NA	0, 7, 7, NA	0, 0, 0, NA	0, 2, 7, NA
online lectures	67, 36, 69, 72	27, 48, 27, 26	3, 10, 4, 2	3, 0, 0, 0	0, 5, 0, 0
obligatory online quizzes	42, 17, 42, 30	48, 57, 38, 57	3, 24, 20, 11	6, 0, 0, 2	-
discussion cafés	-, -, 20, 21	-, -, 56, 49	-, -, 18, 23	-, -, 7, 6	-, -, 0, 2
text book reading	6, 2, 13, 23	30, 26, 40, 47	15, 24, 18, 11	6, 10, 2, 2	42, 36, 27, 15
journal paper reading	15, 5, 9, 13	61, 36, 49, 42	15, 24, 24, 11	0, 5, 2, 0	9, 29, 13, 34
non-course reading	6, 5, 4, 8	24, 26, 24, 32	9, 19, 18, 9	0, 2, 0, 0	61, 43, 53, 47
lecture summaries	82, 48, NA, NA	12, 40, NA, NA	3, 5, NA, NA	0, 2, NA, NA	3, 2, NA, NA
leading questions alongside lectures	NA, NA, 36, 43	NA, NA, 36, 40	NA, NA, 22, 9	NA, NA, 2, 0	NA, NA, 4, 8
reading guides	70, 29, 36, 49	21, 33, 44, 28	6, 14, 9, 8	0, 5, 0, 0	3, 17, 11, 15
live workshops	39, 19, 29, 15	52, 40, 56, 47	6, 2, 13, 34	0, 2, 0, 2	3, 12, 2, 2
peer discussion outside classroom	36, 31, 22, 28	52, 36, 49, 32	0, 14, 11, 11	0, 2, 0, 6	12, 14, 18, 23
examples of past essay questions and answers	55, 17, 49, 55	24, 45, 40, 36	6, 12, 4, 0	0, 2, 0, 2	15, 21, 7, 8
video recording of live lectures	45, 31, NA, NA	27, 45, NA, NA	6, 10, NA, NA	3, 0, NA, NA	18, 12, NA, NA

In their free-text comments, students offered diverse and conflicting opinions on the varied learning resources, with some appreciating the diversity and the ability to pick and choose, and others finding it stressful to not be able to use all resources.

- *Selv om jeg ikke har brukt alle ressursene og ikke hadde like mye utbytte av alt, synes jeg det er fint at man har ulike læringsmetoder å velge mellom, da man lærer best på ulike måter.*
- *The questions alongside the lectures are really helpful to be able to understand more what we need to know, to learn it and to feel more confident.*
- *It was already too much so reading texts and booke and answering questions was out of the question.*
- *Jeg ønsket å være med på alle aktivitetene, men fikk det ikke til å gå opp med jobb.*
- *I also didn't have time to go through so much of the extra learning materials at the end of the lectures, but looked at some of it if I found it particularly interesting or had extra energy that day.*
- *I didn't read journal papers because I honestly didn't have the time. I mainly focused getting through the online lectures and taking notes from them (as well as doing*

everything else of mandatory activities this semester) and honestly, that was more than enough for me!

- *I really liked the YouTube videos that were included in some parts of the course though. Since the evaluation didn't ask about these, I thought I would just mention them, as they were a very nice supplement to get further insight into the different topics! I watched them all and found them very beneficial!*

Views on the text book and how to use it were varied. Some students explained that they did not need to use the book so much because lectures were comprehensive.

- *The book is sometimes a bit repetitive or a bit outside from what is presented in the online lectures, but some of it was useful, so I wouldn't remove it. I quickly found that it wasn't necessary to read everything so thoroughly. I mostly focused on the online lectures and the questions, and looked up the pages in the book and read what I found useful but left the rest. I didn't have time for more. Since my essay and the course for me in general went very well, I think this was the right way for me at least.*
- *As for the Gazzaniga textbook, I did read this in the start of the course, but I found the lectures to be more educational and fun and I just got more out of watching these. This doesn't mean that the recommended readings should be removed, I just mean that I learned more from watching the lectures this semester than the textbook (which is very unusual for me because usually it's the other way around).*
- *I liked that the the textbook reading was specified.*
- *Godt tilpasset samspill av ressurser, likte godt spesifisert lesing.*
- *Jeg brukte Gazzaniga-boken noe, men synes den var veldig detaljert på enkelte områder. Synes det var vanskelig og også kun lese relevante utdrag fra den, da de anbefalte utdragene var vanskelig å forstå uten å se det i sammenheng med resten av kapittelet.*
- *Tekstboken av Gazzaniga skuffet meg, da den ikke hadde svar på det jeg lurte på (den nevnte hverken Marr eller Biederman). Det endte med at jeg brukte andre kilder, som internett og andre bøker, for å forstå deler av fagstoffet om persepsjon bedre. Jeg fant boken "Cognitive psychology - a student's handbook" av Michael W. Eysenck nyttig, og brukte denne en del.*

13.8 Whether students passed essay 1 first time round

A question in the survey asked students "To help us research the relation between how students study, and how well you do in your evaluated activities, it would be useful to know whether or not you passed essay 1 first time or were asked to revise it. Telling us will not violate your anonymity because very many students were asked to make revisions." There was an option for students to indicate that they did not want to answer the question, but this was chosen by only 1 student, in the spring semester, (compared with 7% last semester). This data may in future be used to explore which study patterns and views about the course are most closely associated with good student performance.

14. Detailed results of evaluation for Anita Lill Hansen's module

For more detailed evaluation of this part of the course, students filled out a short additional questionnaire.

Questions were related to: 1. The **form** of the course (i.e., the study plan as a whole with video-notes, suggested literature, organized group-work and supervision of case-work/meetings with the teacher in smaller groups); 2. The **thematic content and literature** for this part of the course (e.g., whether it was interesting, relevant and useful for future careers as a psychologist); 3. The **organized group work** (i.e., the interaction-based case work and whether it was a useful learning activity); 4. The **reason for not participating** in the group work (this was an open question); 5. The reason for participation in the group-work (this was an open question) and 6. **Other feedback** (this was an open question and the students were encourage to add any other feedback to this part of the course).

For the **form** of the course, 43 % of students rated it as *very good*, 49% as *good*, 6% as *acceptable* and 4% as *poor*. The results for the question related to the **thematic content and literature** showed that 60% of the students found it to be *strongly interesting, relevant and useful*, 38% found it to be *somewhat interesting, relevant and useful*, 2% *disagreed somewhat*, and 2% *disagreed strongly*.

36% of the students *agreed strongly* that the organized group work was a useful learning activity, 25% found it to be *somewhat useful*, and 2% *disagreed somewhat*. About 40% of the students did not participate in the interaction-based learning activity. On the open question about *why they did not participate*, most of the students wrote that they did not have time for it, and that it was not obligatory. On the open question related to *why they did participate*, most of the students answered that they participated because it was offered to them, because they trusted the teacher's intention, or because they thought it was interesting.

Other feedback on this part of the course included that some students thought there was too much to read. This was especially the case for spring 2020. For autumn 2020, the amount of literature was reduced but some students still thought it was too much.

It was suggested that the case-work should be obligatory.