Evaluation of course PROPSY305, Cognitive Psychology,

Spring semester 2019

Introduction

This report was written by the course *emneansvarlig*, Prof. Mark Price. 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 an external guest lecturer, and ***affect and higher cognition***, taught by a stand-in teacher. Students also complete a research project (*emneoppgave*). The course is assessed on a pass/fail basis for UiB students, but graded for international students.
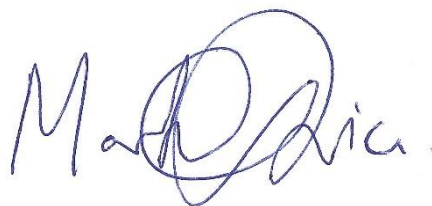
Course evaluation is based on a meeting with the entire class and two online surveys containing both multiple-choice questions and free-text questions. One survey evaluated the course in general, including assessment methods. The other survey evaluated various alternative teaching formats used by Mark Price in his lecture module on *perception, attention and consciousness.* These teaching formats include use of online lectures, online exercises, and student peer review.

Response rate for each survey was approximately 100% of home students, but only 1/5 exchange students completed the surveys (n=34 for the overall course, and n=33 for the module by Mark Price, with 1 exchange student in each sample).

Original data are available at https://mitt.uib.no/courses/15634/quizzes/7354/statistics and https://mitt.uib.no/courses/15634/quizzes/7347/statistics.

This report begins with an outline of changes made to the course on the basis of past feedback from students, then summarises the evaluations of the overall course and of the lecture module by Mark Price. These are followed by more detailed descriptions of students' ratings and verbal comments.

The report was made available to students on the course for comment or correction prior to publishing. No comments were communicated.

Mark Price, 27 June 2019

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1. Recent changes to the course

On the basis of student feedback and teacher evaluation from previous semesters, the following changes were introduced:

- The teachers of both courses taken by students in this semester (PROPSY305 and PROSP306) sent a combined email to students prior to the semester, giving information about the workload and expectations for the semester. This aimed to encourage students to plan their semester so they would have enough time and commitment to fulfil the course syllabus. This "warning" to students appears to have been effective (see below under evaluation of overall course).

- During the introductory meeting for the course, students were given a more expanded tutorial to familiarise them with the layout of the course on Mitt UiB, and also shown a "motivational video" to stress the importance of cognitive psychology for clinicians. This video included an interview with a clinical psychologist. A volunteer teacher trainee in high school psychology helped with these activities.

- The thematic content of lectures on Memory was adjusted to reduce overlap from previous courses. Feedback from this semester suggests this has been successful.

- Students were given longer for revision before their first major assessment.

- Online quizzes and online lectures were expanded to make more room for classroom workshops, and workshop time was expanded.

- We experimented with use of peer review among students during an online essay writing exercise.

- A multiple-choice test was added to the course assessments to encourage students to cover the entire syllabus.

- Video-recording of live lectures was expanded where possible and appropriate. Most formal lectures in 2 out of 3 modules were recorded. This was very popular among students but was limited by availability of teaching rooms with video recording equipment.

2. Summary of evaluation for overall course

The perception of the teachers was that students in this class were better prepared for the semester, had higher participation, and performed better during assessments than other recent classes. While this might be partly individual variation in classes, it may also reflect that teachers sent out an information mail to all new students several weeks before the semester start, warning students that the semester was demanding and advising students to plan so that they would have the necessary time and commitment to benefit from the course. This strategy will be continued for future new intakes on this course.

The proportion of students who rated that the lecture modules contributed "very much" to their knowledge ranged from 91% to 21% across modules. The proportion who rated that the lecture modules contributed "very little" or "not at all" to their knowledge ranged from 0% to 41% across modules. For 2/3 modules, most students rated the difficulty level as about right, but nearly half of students rated one module as too basic. Learning goals were considered clear by the majority of students on all modules. Overall, students felt lectures to have been well prepared, felt welcome to ask questions, and expressed that the course was well administered. Students were very complimentary on the use of Mitt UiB to lay out course structure and materials.

Specific suggestions were made for improvement of each lecture module. For the lecture module on perception, attention and consciousness, students for the most part expressed the course to be rich, varied and well structured, though a demanding learning experience. Time pressure was a common criticism, and students also suggested ways in which some online lecture material could be made more useful in terms of content and technical quality. For the lecture module on memory, students greatly appreciated having a memory expert brought in for this topic, and found the teaching to be very clear, but again complained about the density of teaching. Opinions were more divided on the lecture module on affect and higher cognition, with several suggestions for improvements in content, difficulty level and delivery. It should be noted that this last module has of late been taught by temporary teachers who have had little time to prepare and evolve the module in response to prior feedback. We hope for greater stability once the faculty has appointed a permanent lecturer who can focus long-term on this module.

Cognitive psychology is often regarded as a difficult and unpopular topic for clinical students. It is therefore very positive that the majority of students rated that they found both the topic of cognitive psychology, and the course itself, as more interesting than they had anticipated.

The number of weeks available for this course is clearly an ongoing problem that limits the learning experience of students in this semester. While students were on the whole quite positive about the course in general, many raised the issue of time pressure.

3. Summary of evaluation of assessment methods

Compared with more traditional examination methods (e.g., graded multiple choice, long exam or home exam), most students expressed that they preferred the ungraded assessed essays, and about three-quarters rated that they learned more from this method. Almost all students thought that essay questions reflected the stated learning goals of the course. Many to most students rated the feedback they got on their essays to have been useful.

Most students were unconcerned that not receiving a grade might be problematic for later exchange applications. For the vast majority of students, lack of grade either made no difference, or was rated as *increasing* both their study effort and learning outcome.

Many free-text comments illustrated the students' perception of the advantages of the assessment methods, in terms of writing short conceptual essays, in terms of receiving feedback and in terms of not assigning grades.

Ratings from students suggest that, for the majority, the new multiple-choice test achieved its aim of encouraging them to cover the syllabus more fully and also benefitted their learning; however, there was a diversity of opinion on this test with a small minority finding it detrimental.

4. Summary of evaluation of semester projects

The majority of students rated that they found their semester project (emneoppgave) to be a useful learning experience, that they found the range of project on offer to be interesting, that they found their own project interesting, and that they were satisfied with the way in which project themes were allocated to the different student groups. A small minority of students were dissatisfied with their project supervision and this is noted as a problem to avoid in future semesters. Most students thought their group had worked well together but there were some comments by students complaining of individual groups members not pulling their weight.

About 3/4 of students found it useful to present their project in front of the whole class, and about 2/3 found it beneficial that all students had to be prepared to present any part of their group presentation. About 2/3 found it useful to listen to other group's projects and to have to be obliged to take an active part in generating questions on other group's projects. Holding the project conference in Norwegian, due to the absence of any exchange students, was perceived to be a big advantage by both students and the teacher. This suggests that project presentation is best segregated between home and exchange students.

5. Summary of evaluation of Mark Price's module

Most students claimed to have viewed all online lectures, with many viewing them more than once, and most claimed to be able to keep up with the intense schedule of live and online lectures. Viewing rate appears to have increased, and technical problems have decreased, relative to previous semesters. This is likely to reflect the increased use of obligatory online quizzes and the conversion of online lectures into streamable video format.

Online lectures were rated as clear and interesting by almost all students, and most rated the difficulty level as about right compared to their previous knowledge. Two thirds of students rated online lectures to be at least as good, or better, than live lectures in terms of learning (with a third rating them as worse), although nearly half of students rated that they enjoyed live lectures more. The purpose-made online lectures were on the whole preferred to videos of live lectures that students had not attended (e.g., recordings from previous semesters). However, video recording of live lectures was popular; they were viewed and fund useful by 60% of students. Some students (notably those with child-care commitments) commented in detail that recording of live lectures, and use of online lectures, had been extremely helpful. On the other hand, some students also complained that some online lectures had been too difficult to follow, especially on the topic of consciousness where unfortunately the lecturer had been ill and unable to take some classroom sessions. This needs to be addressed in future semesters.

Expanded use of online quizzes seems to have been successful for the majority of students, with a strong majority approving that the quizzes were obligatory, and strong majorities reporting the quizzes to have had the right difficulty level and to have helped them both keep up with the online lecture schedule and to learn and retain better.

The majority of students claimed it had been useful to take part in an obligatory online exercise where they wrote an essay fragment and then both gave and received online feedback from their student peers. This is encouraging as it is the first attempt to explore the use of peer feedback on this course. One aim of this exercise was to familiarise students with the marking rubric used by teachers for students' assessed essays. Most students rated that their writing of the essays had been helped by use and familiarity with an explicit rubric.

Attendance rates at classroom workshops was (as in previous semesters) still suboptimal, but most students who attended found them to be useful. These activities have been expanded from previous semesters but there is still scope to expand further. More students rated that they wished for such activities to be increased, as a proportion of total teaching hours, than wished for no increase. Some aspects of the workshops can be further improved (see more detailed feedback).

More students supported a laptop ban in lectures, or had no strong opinion on this, than opposed it. In free-text comments, some students asked that the laptop ban be enforced more strictly, while others did not like it.

Almost all teaching formats were rated as very useful or somewhat useful by most students. An exception was relatively low rating for the usefulness of the course text book, and especially the many students who did not use this book at all. This deviates from previous course surveys. It may reflect the strategy of this particular class, or may partly reflect that fact that the course was very intense and students were encouraged by the teacher to use lectures as the primary indication of syllabus. It may also reflect dissatisfaction with the text book. Future course surveys should probe this issue on more detail. The large proportion of students rating that peer discussion outside class was useful to their learning is an interesting observation which should be monitored over several semesters to explore whether this is consistent or varies with individual classes.

6. Detailed results of evaluation for overall course

Contribution of the course to students' knowledge: The extent to which different lecture modules contributed to students' knowledge was rated on a 4-point scale (*very much, to some extent, very little, not at all*). The proportion of students responding either *very much* or *to some extent* varied from 100% to 59%, depending on lecture module. In more detail, responses for the module on perception, attention and consciousness were 91% *very much* and 9 % *to some extent*. Responses for the module on memory were 35% *very much*, 53% *to some extent* and 9% *very little*. Responses for the module on affect and higher cognition were 21% *very much*, 38% *to some extent*, 38% *very little* and 3% *not at all*.

Assessment of the difficulty level of each lecture module: The difficulty level of each lecturer module was rated as either *too advanced*, *about right*, or *too basic* in relation to students' previous learning. For 2 of 3 modules, most students rated the level as *about right*. For 1 module nearly half rated it as *too basic.*

	Perception, attention & consciousness	Memory	Affect & higher cognition
too advanced	9%	9%	0%
about right	91%	88%	53%
too basic	0%	0%	47%

Assessment of clarity of learning goals: Clarity of learning goals for each lecture module was rated as either *clear*, *adequate*, or *unclear.* Learning goals were considered clear by the majority of students on all modules.

	Perception, attention & consciousness	Memory	Affect & higher cognition
clear	91%	68%	47%
adequate	9%	26%	29%
unclear	0%	3%	24%

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

- For the lecture module on perception, attention and consciousness, students for the most part expressed the course to be rich, varied and well structured, though a demanding, learning experience. Some praised use of online material, while others had reservations about length, difficulty and technical quality of some online lectures. Some students expressed how the course structure had promoted their intrinsic motivation rather than an exam-oriented approach. It took some students

time to get used to the style and subject matter of the course. Some expressed that there was too much to do in a short time, while others appreciated the intensive and very structured timetable. In verbal feedback, the class representative communicated that the online lectures on executive control and on consciousness were perceived as too advanced for many students. Students suggested that they would benefit from some more introductory teaching before tackling these lectures.

- For the lecture module on memory, many students complemented the lecturer on being a knowledgeable expert who took an interest in questions, though a minority found the lectures too dry and lacking in alternative teaching formats. It seemed generally very appreciated to have a memory expert brought in for this topic. Opinion was divided on Powerpoint slides, with some liking their detail, and others complaining they were too similar to what the lecturer said. The main reservation was that the lectures were too intense with several hours over only a few days. This is unfortunately difficult to avoid when hiring guest lecturers.

- For the lecture module on affect and higher cognition, students praised the engagement and enthusiasm of the lecturer. At the same there were many comments that parts of the module seemed to lack structure, that lectures could sometimes have been better prepared, and that some contents were too basic. Some students appreciated an emphasis on reading journal papers and the use of group-based discussion. There was nevertheless a broad consensus that some group-based activities had little learning benefit and that classroom time could have been used more effectively. Students requested more content on the topics of problem solving and decision making. Unlike the other modules of this course, the topic of affect and higher cognition has not had a permanent teacher for a number of semesters now, which makes it problematic to develop the module in line with feedback. Student feedback will be communicated to the lecturer who takes the course in autumn 2019, but longer-term stability will require the Faculty to assign a permanent position to this topic (currently in progress).

Assessment of preparedness of teaching activities: Students were asked: "Overall, did you find lectures or other classroom activities to be well prepared?" using the choices *yes*, *neutral* or *no*. The majority answered *yes* (97%), with 3% answering *neutral*, and none answering *no*. However, verbal feedback from students expressed that lectures in one particular module were sometimes felts to be less well prepared.

Did students feel welcome to ask questions? Students were asked: "Overall, did you feel welcome to ask the teachers questions?" using the choices *yes*, *neutral* or *no*. The majority answered *yes* (97%), and 1 student answered *neutral*.

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*. The majority (97%) answered *excellent* or *good* (53% *excellent*). The remaining 3% (1 student) answered *acceptable*.

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 (76%) chose the option "*I think it is more interesting and relevant than I expected before the course*" and the remainder chose "*My views have not changed and I find the topic interesting and relevant*". Nobody selected the options "*My views have not changed and I find the topic uninteresting and irrelevant*" or "*I think it is less interesting and relevant than I thought before the course*". This evaluation is more positive than in previous semesters.

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. All students rated the course as being "*more interesting*" (68%) or "*as interesting*" (32%) as expected and none chose the options "*more boring than I expected*" or "*as boring as I expected*". This evaluation is more positive than in previous semesters.

Further general comments about the course: Some students expressed good satisfaction with the course overall. At the same time, the density of the course, which results from the very small number of weeks we have available for it, was a recurring negative theme in feedback from students. This needs to be addressed at a Faculty level. A representative comment was : *"Dette er det best organiserte og planlagte faget jeg noensinne har tatt på universitetsnivå. Godt jobbet! Men samtidig ekstremt intenst, ett semester med undervisning presset sammen over halvannen+ måned"*.

7. Detailed results of evaluation of assessment methods

7.1 Background

On the lectured part of the course (9 study points), students are primarily assessed via 2 obligatory written essays. These are written in class, online, with full access to literature. Writing time is 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 – revision time is usually only a very few days. Essays are pass/failed by the lecturer. Students are given written feedback on each essay, and a suggested essay-plan template is then made available to students. Students whose essays were poor enough to fail at first round are then asked to revise their essay(s) over a period of a few weeks and resubmit. Under one third of both essays were failed at first sitting by students in this semester, which is a better performance than in previous recent semesters. All students from this semester passed after revision of their essays. Two students who were retaking essays from a previous semester were again failed, even after revision of their essays.

Additionally, students have to pass a closed book, pen and paper multiple-choice test in a classroom setting. This test was new for this semester. Many questions were repeated verbatim from short online quizzes that students had to do online after viewing online lectures. Some questions were also new to the students. There was a wide variation in performance on this test but all students were passed as we did not yet have a bench mark based on previous normative data.

7.2 Evaluation data

Comparison of assessment method with more traditional methods: Students were asked to agree/disagree with the statement: "Compared with other examination methods (e.g. multiple choice, long exam, home exam), I **prefer** the short assessed essays as the main way for my learning to be evaluated by the teachers." The majority (59%) agreed, only 1 student disagreed, and 38% "neither agreed nor disagreed". A second question asked students 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 standard graded (A-F) essays." The majority who agreed with this question was even greater (76%), while 24% "neither agreed nor disagreed" and none disagreed.

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 essay 1, 82% of students agreed it had been useful, while 18% neither agreed nor disagreed and none disagreed. For essay 2, 53% agreed, 29% were neutral and 15% disagreed.

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):

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

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?" Only 1 student (3%) responded *yes*, while 62% responded *no* and 32% were *unsure* (1 no response).

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?" Only 9% of students (3 students) responded that they put "less effort and hours of study" into the course. About half the sample (53%) responded that the lack of grading made *no difference*, and 35% responded that it encouraged *more effort and hours of study*. This feedback is more positive than in recent previous semesters. A second question gave even more encouraging feedback. Students were 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?". Nobody rated their learning as "*worse*", 53% replied it made "*no difference*" and 44% replied that it "*benefitted*". 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, most students (59%) disagreed strongly, 26% disagreed somewhat, 6% were neutral, 6% agreed somewhat and none agreed strongly. At least at face value, these reports suggest that lack of grading is beneficial rather than detrimental to student learning.

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?" On a 4-point scale, most (79%) responded "*very much*", 15% responded "*to some extent*", 1 student responded "*not very much*" and none responded "*not at all*".

Free-text comments on essays: Many comments illustrated the students' perception of the advantages of the assessment methods, in terms of writing short conceptual essays, in terms of receiving feedback and in terms of not assigning grades. A sample of comments are listed below. In addition, there were some comments about having too little revision time, and one suggestion that rooms allocated for essay writing be bigger to give more space. One

student commented that the essay writing time was too short, but this is something we have surveyed before across many semesters, and found that most students like the time period we currently use.

- *Disse likte jeg veldig godt, og håper flere vil ta dem i bruk! Vanligvis på eksamen er det en fordel å skrive så mye og detaljert som mulig, noe jeg mener er helt unødvendig. Her fikk vi øve på å skrive kort og konsist, noe jeg likte veldig godt.*
- *Godt vurderingsgrunnlag som gir mulighet til å vise hva vi har lært i faget. Gode og grundige tilbakemeldinger enten det var godkjent eller ikke godkjent var også nyttig å ta med seg for å forstå hva man hadde gjort riktig, og hva som kunne vært forbedret. Også fint å ha oppgaver som er brede, hvor vi selv kan trekke inn hva vi synes er relevant, men fremdeles holde oss til hva vi har lært i dette faget.*
- *Likte at spørsmålene var veldig gode og relevante til det vi hadde lært. At de er ungraded hjelper på stresset og jeg gir like mye effort og studietimer. Jeg føler jeg kan interessere meg mer i faget, og karakterpresset ødelegger ikke for min interesse i faget. Her kunne jeg forstå litt mer.*
- *Jeg likte å få feedback og bearbeide med kommentarer. Er mye mer nyttig enn å få generelle tips om et godt essay. Likte også gjennomgangen til Mark av hva som er et godt essay da det var mye nyttigere enn tidligere formelle kurs i essayskriving.*
- *Når det ikke ble gitt karakter følte jeg mer frihet til å kunne lære meg det ordentlig med refleksjon, heller enn å sitte ordrett og pugge informasjonen vi ble gitt. Mer fleksibel kunnskap.*
- *Jeg opplevde at jeg jobbet jevnere med pensum, heller enn en siste innspurt før eksamen som jeg pleier.*
- *Spørsmålene ga mulighet til å vise bred kunnskap. Likte forberedelsene vi fikk gjøre i forkant, med seminar, øvelsesoppgaver og tydelige instruksjoner.*

Assessment of the new multiple choice test: This test was introduced to encourage students to cover the entire syllabus properly. The majority (91%) rated the difficult of the test to be "*about right*", with none saying it was "*too easy*" and only 9% rating it as "*too difficult*". Asked: "What was the effect of knowing that you would have a multiple choice test on the amount of course syllabus that you studied?", 79% rated that "It encouraged me to cover more of the syllabus.", 21% rated that "It made no difference to how I studied." and nobody rated that "It encouraged me to cover less of the syllabus". 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?", 65% rated that "In retrospect, I think it benefitted my overall learning.", 26% rated that "In retrospect, I think it made no difference to my overall learning." and only 6% (2 students) rated that "In retrospect, I think it was negative for my overall learning." In summary, students' self-reports suggest the MC text achieved it aims and was beneficial for the learning quality of most students. Additional free-text comments from students varied from very positive to negative, reflecting the diversity of opinions in students' ratings.

8. Detailed results of evaluation of semester projects

8.1 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.

At their project presentation conference, students present their project for 15 minutes in their groups, but are not told which part of the presentation they will give until just before the presentation. Therefore, all students have to prepare the whole of their talk. All student groups in the audience have to actively prepare questions for each presentation they view, with groups selected at random to start each question session.

In this sample of students, only 1 group of students conducted an empirical project.

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.

8.2 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?" 85% answered "*yes*", 1 student answered "*no*", and 9% were "*unsure*".

Range of projects on offer: Students were asked: "Did the range of available project themes include projects themes that interested you?" 91% answered "*yes*", 1 student answered "*no*", and 1 student was "*unsure*".

Allocation of projects: Students were asked: "Are you satisfied with the way the projects were allocated to each student group?" 76% answered *yes,* 21% answered "*neither satisfied not dissatisfied*", and none answered "*no*".

Interest of project: Students were asked: "Have you found your own project to be interesting?" 91% answered "*yes*", 1 student was unsure and one answered "*no*".

Supervision quality: Students rated "Are you satisfied with the quality of supervision you were given for your project?" using a 5-point scale. Responses were: 41% *very satisfied*, 32% *satisfied*, 6% *neutral*, 15% *dissatisfied*, 3% *very dissatisfied*. Free text comments related to

dissatisfaction with supervision have been noted and will be acted on by the course emneansvarlig.

Student project group cohesion: Students were asked: "Did your project group work well together in terms of communication and division of work load?" 65% answered "*yes*", 32% answered "*unsure*", and none answered *no*.

Student project conference: Most students (76%) found it useful to prepare and present their projects at the project conference day, while 6% found it not useful and 15% were neutral. Similarly, most students (65%) found it useful to listen to other students' projects on the project conference day, while 1 student found it not useful and 29% were neutral. Most (68%) rated that it was useful in retrospect to have had to prepare to give any part of their conference talk, with 12% unsure and 18% saying it was not useful. Most (62%) rated that it was useful to be obliged to prepare questions about other students' presentations, while 26% were unsure and 9% thought it was not useful. The teacher's impression was that the conference this semester worked especially well and that part of this can be attributed to the fact that we could run it in Norwegian owing to the unusual absence of any exchange students on the course. In future it may therefore be advantageous to split Norwegian and exchange students for this activity.

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

9.1 Viewing of online lectures

- Nearly all students (91%) reported viewing all online lectures, with the remaining 9% reporting they viewed most lectures.

- Nearly all students viewed the entirety of the online lectures that they viewed, with 58% reporting they also viewed some parts more than once and 39% reporting they only viewed the lectures once. Only one student reported only viewing some parts of the lectures.

- Most students (79%) managed to keep up with the schedule of online lectures with 21% reporting they did not manage.

- Most students streamed the online lectures from Vimeo, but a small minority of 15% of students still chose to view the Powerpoint format of the lectures.

- Most students (73%) reported no technical problems in viewing online lectures, 27% reported some problems but were able to overcome them, and none reported having problems which discouraged them from viewing lectures.

- The lectures were rated as "*clear*" or "*very clear*" to understand by almost all students (53% rated them as "*very clear*"), but 2 students rated them as unclear. All but 1 student rated the lectures as interesting (73%) or very interesting (24%), with 1 rating them as uninteresting.

- Most students (82%) rated the level of the lectures (in relation to their previous knowledge) as "*about right*". None rated them as "*too easy*" and 18% as "*too advanced*".

- 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?*", about two thirds of students reported that online lectures were as good or better than traditional lectures; 30% claimed online were best, 33% claimed they were similar, and 36% that they were *worse*.

- For the question "*In terms of your **enjoyment**, do you usually prefer viewing the online lectures or the live lectures?*", opinions were quite evenly split. About half claimed online was as good or better; 12% claimed online were best, 42% claimed they were similar, while 45% preferred live lectures.

9.2 Using videos of live lectures that students have not attended

- Students' judgement of a lecture that was only given as video-recording of live lecture made in another semester was as follows: 42% had no strong opinion, 39% thought it worse than purpose-made online lectures, 27% though it worse than live lectures, 9% thought it better than purpose-made online lectures and 3% thought it better than live lectures.

9.3 Usefulness of video recording live lectures

- Asked "How useful was it for you that some of my live lectures were video recorded?", 33% said they had never viewed the recordings, 6% viewed the recordings but this was not useful, but 60% viewed the recordings and found this useful. Of the latter, half claimed to view parts of the lectures and half claimed to view whole lectures.

9.4 Obligatory online quizzes

- Asked whether the obligatory online quizzes were "helpful in making you **keep up with the schedule of lectures?"**, 91% of students agreed, with 64% saying "*very much*" and 27% saying "*to some extent*". Two students rated them as "*not very helpful*" and 1 rated them as impairing the ability to keep up with lectures.

- Asked whether the obligatory online quizzes were "helpful for your **learning, understanding and retention** of lecture materials?", 88% of students agreed, with 64% saying "*very much*" ad 24% saying "*to some extent*". Three students rated them as "*not very helpful*" and 1 rated them as impairing the ability to keep up with lectures.

- The difficulty level of the obligatory online lectures was rated as "*about right*" by 91% of students and "*too advanced*" by 9%.

- In terms of how students answered online quiz questions, 76% claimed to answer at least some questions on their own, 52% claimed to answer at least some questions in groups, 1 student admitted getting the answers from other students, and nobody admitted to getting somebody else to answer for them.

- Opinion was evenly divided over whether the uses of obligatory online quizzes should be expanded. While 45% were unsure, 24% said yes and 30% said no.

- Strikingly, 67% of students thought that in retrospect the quizzes should have been obligatory rather than voluntary, with 18% unsure and only 15% saying they should have been voluntary.

- Free text opinions on line lectures were divided. Some students really liked them, especially the flexibility they gave and the ability to stop and repeat. Others complained they were too technical, too long, that the sound quality was poor, or that written notes could have been just as good. An example of positive feedback is: «*Hjalp meg nye å*

kunne gå tilbake og spille av vanskelige områder flere ganger for å få en bedre forståelse Var også lettet å konsentrere seg når man kan se de alene i fred Og ro, enn når man sitter i et klasserom". Examples of more negtive feedback were: *«De siste online forelesningene var for avanserte for å ha dem online og ikke i en klasse.» og «Noen var for kompliserte og lange. Veldig informative. For mye informasjon».*

- Further feedback from the open course evaluation meeting with students again raised the difficulty level of some of the online lectures, notably those on executive processing and on consciousness.

9.5 Obligatory online practice of an essay with online peer assessment

- Most students (88%) rated that they found it useful to write an essay fragment online (27% "*very useful*" ad 61% "*somewhat useful*"), with 12% rating it as "*not very useful*". Most (72%) rated that they found it useful to peer review other students' essay fragments (30% "*very useful*" and 42% "*somewhat useful*") with 27% rating this as "*not very useful*". Most (69%) rated that it was useful to have got peer feedback from other students (24% "*very useful*" and 45% "*somewhat useful*") with 30% rating this as "*not very useful*".

9.6 Familiarising students with the essay marking rubric used by teachers:

- All but 1 student rated that their writing of essays 1 and 2 had been "helped by your knowledge of the marking rubric I provided at the start of the semester?" (42% "*very much*" and 55% "*to some extent*". The remaining student rated "*not at all*".

9.7 Classroom workshops

- End-of-semester evaluation of the 3 hour classroom workshop on top down processing, based on obligatory preparative reading was as follows. Of the 17 students who attended (48% of class), all found it useful (10/16 found it "*very useful*" and 6/16 found it "*somewhat useful*"). Of students who did not attend, 2 rated that this was because they had not prepared the reading, and 14 rated it was for "*other reasons*".

- A more detailed feedback was collected at the end of this workshop. 43% students attended (17, including 2 exchange students), up from 27% last semester. Feedback was obtained from 16/17 participants. Just over half rated the workshop as very useful (56%), with 38% rating it as quite useful and 1 as not very useful. The majority (69%) thought the duration was about right, while the remainder thought it should have been longer. Most (81%) expressed that the workshop was more useful than an additional 3 hours of lectures, with the remainder unsure. Most (88%) claimed to have viewed the preparatory online lectures properly, 1 student had skimmed them and 1 had not viewed them. However, only 31% rated themselves as feeling well prepared in terms of reading the preparatory notes and journal paper. The remainder rated themselves as having "prepared a bit but it could have been better". Free text comments were "really helpful" (n=1), "more workshops!" (n=1), and 2 students commenting that the workshop

could have been better organised (1 of those groups had not had time to present their own mindmap.) The teacher's own evaluation was the new extended duration of 3 hours was a definite improvement, but that too much time was used at the start trying to give a slide-based introduction and overview of the preparatory material, which also came across as less organised and structured than intended, and took longer than intended. In future this needs to be much shorter, with some of its content moved, for example, into a short online introductory lecture. This would leave longer for the group-based creation of mind maps and for students to present to each other at the end of the workshop. A continuing issue is how to encourage more students to attend these workshops.

- End-of-semester evaluation of the 4 hour mind-mapping workshop on attention was as follows. Of the 26 students who attended (79% of class), most (18) all found it "*very useful*", 5 found it "*somewhat useful*" and 3 found it not useful. Of students who did not attend, 1 rated that this was because they had not prepared the reading, and 6 rated it was for "*other reasons*". Students were also asked to fill out a feedback form on the day after the workshop. Of 11 respondents, 8 rated the workshop as "*very useful*" (top rating out of 4), and 3 as "*quite useful*" (second top rating). All thought the duration was appropriate and should be left as it was at 4 hours. All but 1 rated that the workshop was more useful than an additional 3-4 hours of classroom lectures, and 1 rated "*unsure*", though commented that the balance was good as it is.

- Asked "Do you think that a **greater proportion** of classroom time should be devoted to discussion and interactive activities in my lecture module?", only 18% of students replied "no", while 42% replied "yes" and 39% were undecided.

9.8 Laptop ban in lectures

The suggestion that students should not use laptops during lectures (or should at least sit at the back of the class if insisting they used laptops, was popular. More students rated that "*I liked it. It helped my learning process.*" (45%) than rated "*I did not like it. It hindered my learning process.*" or rated that "*I have no strong opinion*". In free-text comments, some students asked that the laptop ban be enforced more strictly, while others did not like it

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

A series of questions tapped students' evaluation of the learning outcome of the various teaching formats used over the lecture module. For each format, students were asked: "In terms of learning outcome, ?? were", and then rated the format on a 5-point scale as summarised below. The format of this question was improved from previous course surveys in order to get a better feel for the relative contributions of different activities.

	very useful	somewhat useful	not very useful	completely unhelpful	did not use at all
live lectures	79%	21%	-	-	-
online lectures	67%	27%	3%	3%	-
obligatory online quizzes	42%	48%	3%	6%	-
text book reading	6%	30%	15%	6%	42%
journal paper reading	15%	61%	15%	-	9%
non-course reading	6%	24%	9%	-	61%
lecture summaries	82%	12%	3%	-	3%
reading guides	70%	21%	6%	-	3%
classroom activities	39%	52%	6%	-	3%
peer discussion outside classroom	36%	52%	-	-	12%
examples of past essay questions and answers	55%	24%	6%	-	15%
video recording of live lectures	45%	27%	6%	3%	18%