Evaluation of course PROPSY305, Cognitive Psychology, autumn semester 2017

Introduction

This report was written by the course emneansvarliq, 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 David Pearson who is a guest lecturer; Higher cognition, taught this semester by a replacement teacher due the illness of our usual lecturer, and covering topics from judgement, decision making, and problem solving. Students also complete a research project (emneoppgave). The course is assessed on a pass/fail basis for UiB students, but graded for international students.

The main course evaluation (referred to as Evaluation A) was conducted by Mark Price, via an anonymous online survey which was completed by almost all students (n=47), complemented by a class discussion at the end of an obligatory activity where all students were present. This report contains separate sections focusing respectively on (1) the lecture modules of the course, (2) the manner in which students were assessed, and (3) the research projects that students conduct during the course. Original data are available at: https://mitt.uib.no/courses/7713/quizzes/2362/statistics

In addition, this document contains an evaluation that specifically focuses on the lecture module **Perception**, attention & consciousness, given by Mark Price. This evaluation (referred to as Evaluation B) is based on a second anonymous online survey completed during Price's lecture module by the same students who completed Evaluation A. The survey aimed to obtain detailed feedback on the use of online resources – especially online lectures. It also included further questions about students' experience of this lecture module. Original data are available at:

https://mitt.uib.no/courses/7713/quizzes/2359/statistics

In order to provide a record for internal course development, this evaluation presents students' feedback in considerable detail. General readers may find it sufficient to read the summary sections that are hyperlinked in the table of contents below.

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Evaluation A - Overall course

PART A1 – Evaluation of the main lecture modules

Evaluation of the 3 main lecture modules is based on several multiple choice questions, plus some free-text questions.

Summary:

- Most students rated the lectures modules as contributing usefully to their learning.
- Lectures were perceived by the majority of students as well prepared.
- Course administration and organization were rated as good or excellent by most students.
- While most students rated the academic level of each lecture module as about right, views on one module were quite polarized with a small minority finding it too challenging. A large minority of students found another module too easy and repetitive of previous courses.
- The course was more likely to have a positive than negative effect on students' interest in cognitive psychology.

Survey outcomes are now presented in more detail.

Learning outcomes: Depending on the lecture module, between 71% and 96% of students rated that the module had contributed to their knowledge of the lectured topic very much or to some extent (for very much this ranged 21% to 58%), while the proportion of students rating the contribution as *very little* or *not at all* ranged from 2% to 27%.

Lecture preparation, organization and open-ness to questions: For the course as a whole, teaching activities were rated to be well prepared by 90% of students (only 1 student positively answered no), 94% of students rated that they felt welcome to ask questions, and 86% of students rated the administration and organisation of the course to be *good* or excellent (23% excellent; 1 rated this as poor). These statistics are very similar to feedback from the previous semester.

Academic level of course materials: For lectures by Mark Price, 71% of students rated the academic level of lectures (in relation to their previous learning) to be about right, although 27% rated this module as too advanced. The latter figure is slightly higher than when the same students rated the same module in an earlier survey on those lectures (15%). For lectures by Pearson, 54% rated the level about right and 44% rated it as too basic. For lectures by Pfister, 60% rated the level as about right, with 21% rating it as too advanced and 17% as too basic. This has been communicated to the lecturers so they can adjust course contents accordingly.

These ratings can be interpreted in the light of the more detailed comments about what students liked most or least for each lecture module:

For lectures by Mark Price (Perception, Attention, Consciousness), there was considerable disagreement between students, both in which topics they liked or disliked, and in whether they found the teaching style, course structure and thematic contents to be accessible. This reflects findings from the focused survey on Mark Price's lectures. For example, while many students were very complementary about the lecturer's engagement, inspiration and ability to explain complex themes, and about the large amount of structured online materials that complemented live lectures, there were several who expressed feeling overloaded, and/or found the teaching style confusing and disorganized. The contrast in views between the positive and negative views on almost every aspect of this module are striking. Some comments by students may help to shed light on these opposing views. These comments included views that:

- for some students it felt there was too much to do in too little time
- it took some time to get used to unfamiliar teaching styles and formats, though things eventually dropped into place
- workshops were very useful in helping students to understand difficult topics (though these had very low attendance)
- workshops tended not to be attended because they were not obligatory

One student who found the module difficult suggested that it might have been easier in Norwegian. In this respect it is notable that the majority of dissatisfied comments are in Norwegian, while the majority of satisfied comments are in English. A possible conclusion is that more time to teach the module, along with greater attendance at workshops (whose aim is to help students master and integrate difficult material), might help to make the course more accessible to all students, including those who feel less at home with being taught in English and in a teaching style and format that may be new to them. Unfortunately, it will difficult to increase time allocation to this course given particular organizational challenges with this semester of the professional study. It is also important that students coming into this semester are prewarned that parts of the courses will be intense and require a full-time commitment.

For lectures by David Pearson (Memory), students generally praised the overall quality, clarity and structure of the lectures. There was some disagreement about Powerpoint slides, with several students commenting on how useful they were, but a minority commenting they were a bit boring. Where students differed most was in the extent to which they felt that course contents repeated themes they already knew. Although a minority found the level too advanced or intense, many expressed that the level was too repetitive of previous courses. Some students picked out specific themes that students could be assumed to know (e.g., discussion of single case studies of HM and CW were thought to be too repetitive for most students), while for others a larger part of the contents were repetition. It should be noted, however, that many students who critiqued repetition also still praised the quality of the lecturing. Some students explained how, despite repetition, the lectures had been very beneficial. In summary, for most students, some course themes could be dropped and replaced by expansion in other areas. Finding the right balance between repetition and

novelty is challenging for teachers when students differ in their previous backgrounds, and should hopefully become easier when this background is homogenized by new intake procedures.

For lectures by Hans Rudiger Pfister (Judgement, Reasoning, Decision Making), students had quite varied opinions. This lecture module was a temporary replacement by a guest lecturer for a missing teacher. In summary, many students expressed that the thematic content was interesting, while many also expressed that parts of the module, especially at the start, were much too repetitive of previous classes. Student acknowledged that they had been told by the lecturer to say if material was too basic, but students were in practice reluctant to give this feedback. Cross cultural differences in teacher-student interaction may have played a role here. At the same time that some course content was too easy, some content was often considered too difficult to follow; this applies especially to more mathematical parts of the lectures which many students appeared to have struggled with.

Students' perception of cognitive psychology: For clinical psychology students, cognitive psychology is often a less popular topic. We were interested in the impact of the course on students' perception of the topic in general. Three quarters of students rated the topic of cognitive psychology to be as interesting, or more interesting, than they had thought previously, and, over the course, more students changed their views in a positive direction (33%) than in a negative direction (1 student). In relation to their expectations about the course itself, the majority of students rated the course as being as interesting (46%) or even more interesting (35%) than expected. Even though a minority (17%) rated it as more boring than expected, these figures are an improvement over the previous semester.

Free text comments from students about the whole course: These were consistent with the variation of views expressed above. Some made positive comments about the course in general (e.g., "Been blown away by many themes, lectures and cognitive psychology is more interesting now than ever"), while others repeated frustrations about organization and work pressure (e.g., "Alle modulene og all informasjonen på nettet kan gjøre ting ganske overveldende. Her kunne det vært mindre informasjon for å gjøre det mer oversiktlig.")

Various suggestions from students included expanding the use of online quizzes, online lectures and classroom workshops, avoiding sending out course information by mail at late night times, and alternative ways to organize the whole semester.

PART A2 – Evaluation of the student assessment method

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 including 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. An equivalent of approximately a C grade essay is required to pass. Students are given written feedback on each essay, and a suggested essay-plan template is made available to students

after the first round of writing. Students who fail then revise their essay(s) over a period of a few weeks and resubmit. Approximately one third of both essays were failed at first sitting by students in this semester. All students passed after revision of their essays.

Additionally, students are asked to pass two short multiple choice tests, taken online at home, which tested knowledge from two of the online lectures.

Evaluation of the assessment method is based on several multiple choice questions, plus one free-text question that was worded "Have you any other comments about what you liked or disliked about the assessed essays?"

Summary:

- Over half of students preferred the assessment method compared to other standard examination formats, including graded exams.
- A larger majority (69%) rated that they learned more from this format than from normal graded exams.
- Most open comments about the assessed essays were positive.
- Around three-quarters of students rated feedback on their written essays as useful, and satisfaction with feedback was more general than in the previous semester of this course.
- Opinions varied as to whether lack of grading led to reduced study. A minority of students were encouraged to try and get through the course using existing knowledge.
- Most students were unconcerned about lack of grades in relation to their cv.
- Online quizzes (both obligatory and voluntary) were rated by most students as useful

Survey outcomes are now presented in more detail.

Just over half of students (58%) agreed with the statement that they preferred the ungraded assessed essays compared to other standard examination formats, including graded exams, with only 8% positively disagreeing. A larger majority (69%) rated that they learned more from this format than from normal graded exams, with only 15% rating that they learned less. Most open comments about the assessed essays were positive (e.g., "Jeg likte denne måten fordi det ikke er like stressende som en eksamen, det er mulighet for forbedring om det går dårlig og tilbakemeldingene var gode. Man må også øve og forstå stoffet, så føler ikke at man lærer mindre av pensum heller. Håper dere fortsetter med denne typen vurdering.").

Timetabling of essays on separate days, shortly after the end of lectures and with little time for revision, plus the opportunity to revise essays after receiving feedback, were all rated as useful by the majority of students. As for previous surveys, it is interesting to note that the short and conceptual nature of the essays, which teachers on the course consider to be important aspects of directing students towards deep learning, were perceived to be useful by only around half of students.

The written feedback that each student personally received on their essays was rated as useful by 71% and 77% of students for essay 1 and 2 respectively, with only 13% and 8%

disagreeing. Satisfaction with feedback was therefore more general than in the previous semester.

Half the sample (52%) rated that the lack of grading made no difference to the effort and hours they put into their studies, and 8% responded that it encouraged more effort and hours of study, but many (38%) responded that it led to less effort and hours of study. This largely replicates data from the previous semester and again raises a need to expand other assessment exercises during the course. Similarly, although more than half of students (60%) of students disagreed that lacking of grading had encouraged them to try "as far as possible to get through the course using knowledge I already had from previous courses." (29% strongly disagreeing), and 21% neither agreed nor disagreed, there was a minority of 17% who agreed.

Only 1 student rated concern that "ungraded course assessment might make it more difficult for you to apply successfully for an exchange semester in another country", with 71% rating no concern no and 25% unsure. Concern about not being graded was therefore even less than in the previous semester's survey.

Short online multiple choice quizzes during Mark Price's lecture module were rated by most students as a useful incentive to help them keep up with the course, whether the quizzes were obligatory (75%) or voluntary (67%), with only 13% of students explicitly disagreeing. Enthusiasm for expanding obligatory quizzes was less (40%) than for expanding voluntary quizzes (73%), despite the obligatory quizzes having been rated as more effective.

PART A3 – Evaluation of semester projects (emneoppgaver)

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.

In this sample of students, about two thirds of students (65%) conducted empirical projects and a third (33%) conducted theoretical projects.

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.

Summary:

- Students mostly found their projects interesting, to have been a useful learning experience, and to have been well supervised.
- Group cohesion was rated as considerably less problematic than the previous semester.

- Attempts to introduce new procedures for the students' project conference, in order to improve participation and learning outcomes, were initially met with a lot resistance by some members of the class. However, a compromise was reached after much discussion among students and between the student representative and emneansvarlig. The final procedure was rated as beneficial by most, though not all students. It was also perceived as very beneficial by the emneansvarlig. It should be continued, but it's aims should be better communicated to the students.
- Most student groups submitted papers with many mistakes in formatting and detail. To encourage a general raising of standards, most papers were returned to students for revision before they were passed. To avoid unnecessary extra work by students and teachers at the end of the semester, students need to be pre-warned and prepared that passing their papers may require a higher standard than they are used to.

Survey outcomes are now presented in more detail.

Interest and learning outcomes from projects: Almost all students (96%) rated their learning experience from their semester projects as useful (up from 60% in the previous semester). Only 1 student rated it as not useful (down from 20% in the previous semester). Most (90%) said that the range of projects on offer included themes that interested them (again an improvement from the previous semester). Most (92%) said that their project turned out to be interesting. Many (34%) rated their projects as turning out more interesting than they expected, with 43% rating them as interesting as I expected and only 14% less interesting. Most (85%) were satisfied with the way projects were allocated, with none rating themselves as explicitly dissatisfied.

Satisfaction with supervision: Regarding satisfaction with supervision quality, 40% of students were very satisfied, 42% satisfied, 15% neutral, 2% dissatisfied, 0% very dissatisfied. Satisfaction was therefore higher than in the previous semester. As for the previous semester, comments included that "different supervisors demand very different amounts of work", and as usual the teachers' observations were that students also vary considerably in commitment and in what they consider to be a reasonable amount of work.

Group cohesion: Students were asked: "Did your project group work well together in terms of communication and division of work load?" 88% answered yes, 10% answered unsure, and none answered no. These results are much improved over the previous semester when only 54% reported good group cohesion and 24% reported bad cohesion. Nevertheless, free text comments gave examples of the challenges of working in groups, including the problem of coordinating groupwork when students are doing their clinical placements at different times

Project conference: This semester, several innovations were introduced into the organisation of the students' conference (two half days) where they present their projects: (1) all students had to prepare to present any part of the shared group presentation; (2) all groups had to prepare questions for other groups' presentations, and questions were selected at random; (3) laptops were banned in the audience to increase audience focus on the talks; (4) half the presentation period for each talk was supposed to be for tying the project theme to the themes of the lecture courses. These innovations were introduced to combat long-running problems with emneoppgave presentation. For example, students in

the past have tended to learn one part of their project (such as just the methods, or just the discussion). Second, students have tended to not pay attention to other students' talks. Third, students have complained that the projects are too disconnected from the lecture course.

Most students (83% compared with 51% in previous semester) found it useful to present their projects at the project conference day, while 6% (previously 20%) found it not useful and 8% (previously 29%) were neutral. However, as in the previous semester, only half the students (54%, previously 51%) found it useful to listen to other students' projects on the project conference day, while 17% (previously 20%) found it not useful and 27% (previously 29%) were neutral. Asked "In retrospect, have you benefited from the obligation to prepare yourself to give any part, or all, of your project presentation?", 60% of students said yes, 23% said no, and 15% were unsure. Asked "Have you benefited from the obligation to prepare questions about other students' presentations?", 77% of students said *yes*, 17% said *no*, and 4% were unsure. Survey results therefore suggest that students felt the experience of presenting to be more useful than the previous semester's cohort, and most (though not all) felt a benefit of the new procedures used in the conference.

It should be noted that the strategy of asking all students in each group to be prepared to present any part of their group talk, but still share the presentation, was a compromise reached between the emneansvarlig and the students. The initial plan had been that 1 student would be selected at random, just before the talk, to give the whole talk. Some students complained vehemently that this was too stressful, and after much discussion the compromise was reached.

Free text comments about the presentation day expressed opposing views from students Some supported the new formats. For example:

- Likte at vi var nødt til å forberede oss alle sammen, en god erfaring og fin læringsprosess som de fleste har godt av! :-)
- Min gruppe valgte formatet der en av oss holdt presentasjonen. Dette var en VELDIG god måte å gjøre det på! Det gjorde at alle forberedte seg veldig godt på hele presentasjonen, og at manuset ble skikkelig gjennomarbeidet. Dessuten tror jeg vi brukte mer tid og innsats på forberedelsene enn de gruppene som presenterte delt. Det lå rett og slett litt mer i potten, og man jobbet ekstra hardt for at det skulle bli bra. Å dele på fire virket i hovedsak som en litt enklere utvei, uten noen umiddelbare pedagogiske fordeler - i motsetning til det å kanskje måtte holde alene.
- I found it REALLY educational, that we had to prepare the entire presentation so every one in our group could do the presentation, alone. Sure, we were nervous before, but that made us even more prepared than if we would share the presentation. After my opinion, every group should have presented the way you initially wanted us to. Because that made us more prepared than if we could have leaned upon each other. For the first time, I can say that I know my entire termpaper by heart. Not just the part that I wrote. With your method, we chose to write the whole paper together. Yes, this is more work for us, but we learned a lot more and the paper turned out WAY better. With that said, you should of course help the ones with massive anxiety for presenting. And maybe not make them do it alone. But I don't think this is not 80% of the class, and I think a lot of my classmates

chose "the easy way out" because it was simply more comfortable. So thank you Mark, for at least trying to give us a challenge, so we could grow academically.

By contrast, others opposed them and felt that the changes infringed their autonomy as students. For example:

Synes det ble mye styr rundt dette med presentasjonen, og at det motgår litt dette med ansvar for egen læring når det skal trekkes samme dag også videre. Utenom det var det helt greit.

Some students commented on why they did not find the presentations of other students to be of much educational value.

- I did not find the conferences that interesting and educational. First, I'm not a person that learn that well from simply listening. Furthermore, I think because a lot of the ones that did the presentation simply red from their manuscript, I had a hard time following them. It's good that you keep a low threshold for the presentation, but I think some took the "you can simply just read from your paper" a tad too literally.
- Det eneste er at det er vanskelig å opprettholde fokusert oppmerksomhet på konferansene som varer en hel dag. Ift til læringsutbytte følte jeg det ble for mye på for kort tid, og at presentasjonene til folk kan forbedres, og at det blir mye spesifikk kunnskap som jeg ikke henger med på som de har jobbet med, og at noe av dette handler om manglende god evne til å formidle stoffet på en lett måte. Samtidig en hektisk periode hvor presentasjonene sikkert kunne blitt gjort bedre men folk har ikke tid.

One student suggested increasing the presentation times beyond 10 minutes. Unfortunately this is a timetable constraint due to clashes between simultaneous courses.

Overall quality of students' written work: This semester, the emneansvarlig insisted on a high standard for students' submitted papers, with particular focus on APA standards, general quality of formatting, and attention to detail. Most of the submitted emneoppgave were returned to students for corrections before they were passed. This "clamp down" on standards came as a considerable surprise to the class of students, and caused a lot of last minute work close to the end of the semester, and even extended beyond the end of the semester for some groups. Nevertheless, many students commented privately to the emneansvarlig that they agreed their initial work had not been up to standard, and seemed in retrospect appreciative of the need to make revisions. In future semesters, students should be warned from the outset that a high standard will be imposed, and that it is crucial they use the course's online checklists to help them format and structure their papers.

Evaluation B - Mark Price's lecture module

All students enrolled for the course were asked to complete an anonymous survey on the lecture module "Perception, Attention & Consciousness", given by Mark Price who is also the course emneansvarlig. The survey included questions about the use of online lectures which had been expanded on from the previous semester. Online lecture format had also been improved to allow live streaming of continuous video lectures. Further questions were included on this lecture module in general. Participants were 47 home students on the clinical professional study, and 1 exchange student (close to 100% response rate). One student entered no responses. The survey was completed online. It contained multiple choice questions and some free text questions. It was devised and analysed by the lecturer, who also prepared this report.

Survey data for different aspects of the lecture module are presented in separate subsections. Each subsection begins with a summary, followed by more detailed data.

PART B1 - Assessment of online lectures and video-recordings of live lectures

Summary and action plan:

- Online lectures were viewed in their entirety by most students, and parts were often viewed more than once: Most students (90%) viewed all or most of the online lectures, most (89%) viewed the whole of each online lecture, and half reported viewing parts of the lectures more than once. A minority of students did not view all online lectures. Action to be taken: Obligatory online quizzes can be expanded to encourage all students to follow these lectures.
- Online lectures were perceived to present tuition that was both clear and interesting by 96% of students.
- Relative to previous levels of knowledge, the level of the online lectures was reported as "about right" for most students (83%). Of the remainder, most rated these lectures as "too advanced" (15%) rather than "too easy" (1 student). Action to be taken: The current level of the lectures therefore seems to be pitched correctly for the majority of students.
- For the majority of students, online lectures were perceived as being as good, or better, than live lectures in terms of both the learning value (77%), and their enjoyment (77%). The proportion of students who preferred online lectures was greater than those who preferred live lectures, in both respects. Despite having increased the use of online lectures compared to last semester, their assessment is even more positive than before.
- Most students (88%) streamed online lectures from Vimeo rather than viewing them as an online Powerpoint show. Action to be taken: Future online lectures can be presented only as streamable Vimeo lectures and Powerpoint format can be discontinued.
- Most students either reported no technical problems in viewing online lectures or were able to overcome any problems. Action to be taken: Future surveys need to discover why

- there are still technical problems for a minority of students after introducing live streaming of lectures.
- Satisfaction about the proportion of online lectures was unchanged from last semester despite an increase in their proportion; over half of students found the proportion to be about right and, of the remainder, slightly more students suggested expanding than reducing their proportion. A single pre-recording of a live lecture was mostly judged as poorer than purpose made online lectures or live lectures. Video recordings of live lectures were viewed and found useful by the majority of students. *Action to be taken:* We should continue with a mix of live and online lectures, continue with video recording of live lectures, and possibly convert the pre-recorded video lecture into an online lecture.
- Free text comments about online lectures were mostly positive, praising the general pedagogic value of this learning format, the ability to "stop and think", and the ability to schedule lectures when convenient. Some students commented that they liked online lectures but that live lectures were also important to retain. A small minority of students claimed the online lectures were difficult to understand, or that they had problems streaming lectures from home. In future, it should be stressed to students that they are able to stream online lectures at the faculty if connection at home is too slow. Action to be taken: On balance these comments encourage continued use of online lectures due to their learning advantages, but retaining a mix of lecture formats may be optimal.

Survey outcomes are now presented in more detail.

1) How many of the online lectures did students view?

Most students (90%) viewed all or most of the online lectures (66% viewed all, and 26% viewed most), but a minority did not (6% viewed "just a few" and 1 student viewed none). When viewing online lectures, most students (89%) viewed the whole of each online lecture, and about half (49%) reported viewing parts of the lectures more than once. Only 9% said they usually only viewed "some" part of the lectures. None said they viewed "Hardly any of the lecture" and 1 reported not viewing any lectures.

2) Quality of online lectures

The lectures were rated as "clear" or "very clear" to understand by 96% of students (34% rated then as "very clear"). A minority of 4% rated them as "unclear". 96% rated them as "interesting" (79%) or "very interesting" (17%), while 1 student rated them as "very uninteresting".

3) Level of lectures

83% of students rated the level of the lectures as "about right" (slightly up on last semester). One student rated them as "too easy" and 15% (7 students) as "too advanced".

4) Perceived value of online lectures

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 77% reported that online lectures were as good or better than traditional lectures; 42% claimed online were best, 31% claimed they were similar, and 23% that they were worse. One student could not compare as they had not viewed online lectures.

For the question "In terms of your *enjoyment*, do you usually prefer viewing the online lectures or the live lectures?", about 77% claimed online was as good (38%) or better (35%), while 25% preferred live lectures.

5) Viewing format for online lectures

Most students (88%) streamed online lectures from Vimeo, 6% reported streaming them as a Powerpoint show, 4% downloaded the Powerpoint shows and none claimed to download the Vimeo movies.

6) Technical problems

The majority of students either reported no problems in viewing online lectures (55%), or were able to overcome any problems (43%). Only 1 student reported "I had problems which discouraged or prevented me from viewing some or all of the lectures".

7) Recommendations for format and future development of online and recorded lectures

About half of students thought the amount of online lectures was about right (57%), 28% thought I should expand their use, and 15% thought I should reduce them. Note these statistics are again unchanged from last semester despite an increase in the proportion of online lectures.

One lecture had been presented as a recording of a live lecture. 17% of students had not viewed this lecture (although it was an important one). 40% had no strong opinion about it compared to other formats. More students (15%) thought it worse than live lectures, rather than better (4%). More students thought it worse than normal online lectures (28%) than better (9%).

Some live lectures were recorded. More than half of students (64%) viewed whole recorded lectures (28%) or parts of them (36%) and found this useful. However, 34% did not view them. One student viewed at least some of them but did not find this useful.

8) Free text comments on use of online lectures and lecture recordings

Free-text comments were invited about the use of both online lectures, and videorecordings of live lectures. Comments were thematically categorised.

Most comments about online lectures were positive (n = 25). Of these, 8 generally praised the value of this format, 10 specifically praised the value of being to "stop and think", 2 commented on the value of being able to schedule lectures when convenient. Additionally, 6 commented that they liked online lectures but that live lectures were also important to retain.

Students' positive comments are reproduced verbatim below as they nicely illustrate the perceived advantages of this format (note that 3 comments come from student's general comments on what they liked most about the lecture module.)

General praise (n=8)

- You are the first teacher to actually use Mittuib functionality and post online lectures. I believe online education to be far more superior to old school snail way of doing things - if the lecture can be viewed online, I prefer online. Live meetings should be reserved to interactive work only - where we can actually interact, ask questions and do everything that we cannot do in the listening mode (normally, what a lecture is).
- Would like to have more online lectures and rather more live workshops than live lectures.
- Utrolig kjekt med online-lectures. Gjør at man kan komme tilbake og få en live forelesnings-opplevelse, komme tettere på stoffet. Mark Price generelt over alle andre på variert undervisning- har mye læeringsutbytte.
- The online lectures really helped expanding the knowledge from the face-to-face lectures.
- Jeg syns online lectures var en veldig god måte å lære på, fordi da var jeg mer avslappet i læringssituasjonen og kjente jeg kun kunne ha fokus på faglig innhold. Å... sitte i en forelesningssal med veldig mange andre kan tidvis være noe anstrengende og på den måte "ta" noe av den kognitive kapasiteten til å ta inn/ære ny informasjon. Syns online lectures ga veldig godt læringsutbytte!
- Likte online veldig godt.
- Likte best at vi kunne se forelesninger på nett, dette gjorde det lettere å lære og lese på egenhånd hiemme.

Comments specifically on value of being able to pause and think (n=10)

- I'm an exchange student and specially during the first months that was difficult for me to follow live lectures because of my English so online lecture were really useful for me, I could pause, rewind and that really helped me even if it takes a really long time.
- Online lectures were the most useful to me as I could view them in my own time, stop, rewind etc. to write notes/reflect on the topic. Also I paid better attention to the online lectures. However; the live lectures were really good. Reading/viewing lectures on my own is just my way of learning. :-)
- Det var fint å kunne pause og se det i eget tempo for å få med seg alle elementer
- I found them very useful. What I especially liked about the online lectures is the option I as a student have to pause, think of the content, rewind and google etc. to understand things better. I found the option to take the course in my own tempo very helpful.
- Det positive er at man kan stoppe opp, spole opp og ta notater underveis hvis noe er uklart. I tillegg kan man time visningen til når det passer best for en selv, noe jeg fant veldig nyttig. Online lectures er de jeg husker best fordi jeg gjorde en dypere prosessering av stoffet (system 2)
- Jeg synes faget i seg selv var vanskelig, så online lectures var nyttig ettersom jeg kunne gå tilbake og bruke mer tid på ting jeg ikke forstod.
- Jeg syns det var fint med online lectures, for da kunne jeg ta pause når jeg ville og notere og bruke tid på å se det. Ofte i forelesning kan jeg dette ut og da henger jeg ikke lenger med på hva som blir sagt.
- Jeg hadde planer om å se alle online lectures og være på alle "live", men dette skjedde ikke. Dette har nok påvirket hvor nyttig jeg følte det var. Jeg syns i utgangspunktet det er en bra måte å gjøre det på, både for variasjon i undervisning og med tanke på at man kan se dem når man vil og ikke må måte opp til et bestemt tidspunkt. Det er også en god mulighet til å gå frem og tilbake om noe er uklart. Jeg syns altså dette er noe som bør gjøres fremover også i andre fag:)
- Online lectures are great mostly because you can pause and go back in case you miss an important point. I have had problems managing to keep up with lectures in earlier semesters (mostly because they are a little boring) but the combination of live and online this semester I think works excellent!

Benefit of working in one's time (n=2)

- Det var nyttig å kunne se på forelesninger når det passet best selv.
- Firstly it's somewhat hard to review these lectures considering it's been so long ago. I did enjoy the online lectures due to the fact that I could watch them at my own leisure. I was more focused and more aware of what information I was listening to and looking for. This is obviously my own fault for not preparing before the live lectures, however I think this applies for many of the other students as well. Preparing for live lectures is not the norm as far as I'm considered.

Benefit of variation in format (n=6)

- I thought it was refreshing and nice to have different forms of lectures, and enjoyed the use of all of them.
- Jeg synes det var nyttig å kunne pause og spole tilbake på temaer jeg synes var vanskelige. Jeg hadde likt å ha flere av disse, men ikke fjerne live lectures.
- Overall I felt the online lectures paired with the live lectures was a good combination and a useful tool for learning.
- Jeg likte at det var en kombinasjon av live og online forelesninger. Det jeg likte med online forelesningene var at jeg kunne stoppe og spole tilbake, for å få med meg alt. Det hadde likevel blitt for mye med bare online, for jeg brukte ofte lang tid på dem, og det er litt mer «tiltak» å sette seg ned med dem enn å dra på forelesning.
- Skulle ønske alle forelesningene kom i begge formater (kanskje kravstor). Jeg liker veldig godt å gå på forelesning, men ofte hadde det vært fint å kunne gå tilbake og se på nytt. Formatet hvor du ble filmet under forelesning var veldig bra. Helt supert.
- Eg likte at det var ein kombinasjon av både online og live forelesingar.

Seven students gave negative comments about online lectures. From verbatim comments as shown below, it can be seen that few of the problems were intrinsically related to the online format of the lectures. Three students found the lectures difficult to understand, 3 had problems streaming lectures from home, although 1 of them said the problem was quickly resolved, and 2 indicated they had not picked up that some of the online lectures were available.

General problem with comprehension (n=3)

- Syntes av og til det var vanskelig å følge disse online forelesningene. Vanskelig å få en forståelse av sammenhenger og det store bilde. Vet hvertfall for min egen del at å putte ting litt mer i kontekst, evt ta med noen flere eksempler sånn man forstår det bedre hadde hjulpet for min del.
- Jeg synes det var litt vanskelig å følge med og ta gode notater, både i live og online forelesninger. Hadde satt pris på en litt enklere måte å forklare en del ting på. Feks synes jeg det var vanskelig å få en god forståelse av "computational levels".
- Jeg likte at det var online lectures, men synes noen ganger det var vanskelig å henge med så måtte trykke på pause ganske ofte.

Technical problems (n=3)

- Hadde store problemer med å spole på live online lecture
- I found your online lectured hard to stream sometimes, but this might be due to bad internet at home (idk). Otherwise, I really liked that I had an opportunity to take notes from these online lectures as well, as you might forget about things that you have said in class earlier.
- I had some technical problems with the recorded lecture from last semester, but you responded to my email about the problem quickly so it worked out

Not realising that some lectures were available online (n=2)

- Det var noen ganger vanskelig å få oversikt over hvilke online lectures som var lagt ut. Jeg fikk f.eks. ikke med meg at en av dem var lagt ut med en gang, men skjønte først at jeg hadde gått glipp av den når jeg hørte andre snakke om den. Har snakket med i hvert fall en annen som også ikke fikk med seg denne! Mener det var den om oppmerksom og eksekutive funksjoner.
- Kan ikke huske at forelesningene ble tatt opp på video, tenker det kunne vært nyttig å se noen av disse om igjen

Seven students commented that online lectures were problematic due to the intensity of the course which made it difficult for them to navigate back and forth between online and live lectures within a short time frame (although 4 of these students were still positive about online lectures in general).

- I think it's better to reduce the use of online lecture and promote the live lecture, because of the thickness of the program
- Too many things to do in the same period of time with the live classes
- Jeg synes at formålet med mengde forelesninger (både online og live) og opplegget generelt er bra, men det er alt for mye å gape over på bare et par uker. Det var meget stressende, krevende og intensivt, og dette følte jeg at å dela læræingsutbyttet betraktelig, noe som er svært synd.
- Jeg likte online forelesningene, men det var stress å holde følge med det og live. Det ble rett og slett litt lite tid
- Jeg likte bruken av online lectures og pre-recorded lectures, selv om jeg synes det kan gå litt fort i svingene. Med dette mener jeg at det går veldig kort tid mellom det vi må se og forelesningene. Et problem her er at dersom jeg ikke rekker å se en av videoene så vil jeg heller ikke henge med under live lectures. Jeg har prøvd å se på innspillinger da jeg opplever kvaliteten som dårligere og det er vanskeligere å følge med.
- The cognitive part of the semester was too dense, which made me skip some of the last online lectures and just view the power point
- I like the online lectures, But the schedule were somewhat tight in my opinion. It would be nice to have more days in between.

In their general comments on this lecture module, 4 students commented on the relative merits of purpose-made online lectures versus recordings of live lectures from previous semesters (recorded with Video Notat). Here opinions differed: Three students specifically reported bad sound quality with the old recording of a live lecture, while 1 said the video lecture was very good.

- Online-lectures med kun stemme og forelesnings-slides syntes jeg fungerte best. Jeg vet ikke helt hvorfor. Kanskje fordi jeg syns det visuelt sett er tydeligere og enklere å forholde seg til. På disse lectures-ene var også lyden best.
- I think the online lecture that was recorded from another semester was not good, as it contained the students breaks and wasn't cut for only the lecture content.
- Vanskelig å høre og dårlig kvalitet på forhåndsinnspilt fra annen forelsning (mye støy etc).
- Formatet hvor du ble filmet under forelesning var veldig bra. Helt supert.

PART B2 - Assessment of classroom discussion sessions

Summary and action plan:

Two classroom group-work and discussion sessions, of 2 and 4 hours respectively, were poorly attended (48% and 62% non-attendance), partly because students had not done the preparatory reading or generally felt unprepared. Students who attended mostly found the sessions to be useful, especially a 4-hour mindmapping workshop in attention which was rated as "very useful" by 16/19 students and "somewhat useful" by the remaining 3 students. Opinions were divided on whether classroom activity should be expanded, but were similar to a previous semester where there had been less such activity, and were still slightly in favour of more classroom activity. Action to be taken: Try to increase encouragement to attend classroom activities, and continue to expand classroom activity.

Survey outcomes are now presented in more detail.

Evaluation of a 2 hour classroom discussion based on obligatory preparative reading was as follows. Of the 26 students who attended, 2 did not find it useful, 16 found it "somewhat useful" and 8 found it "very useful". However nearly half of students (48%) did not attend, 15 because they had not done the preparatory work, 7 did not attend for "other reasons" and 3 did not attend because they did not think it would be useful. Note that this session was subjectively self-evaluated by the teacher as less successful than on previous occasions.

Evaluation of a 4 hour classroom workshop on attention was as follows. Of the 19 students who attended, 16 found it "very useful" and 3 found it "somewhat useful". However, most students (62%) did not attend, 12 because they did not feel prepared, 15 did not attend for "other reasons" and 5 did not attend because they did not think it would be useful. Note that this session was subjectively self-evaluated by the teacher as very successful.

Asked whether they thought "more classroom time should be devoted to discussion activities in my lecture course?", 35% said "yes", 40% were "unsure" and 23% said "no". These statistics are similar to last semester which involved less classroom activity.

In their overall comments on what they liked best in the lecture module, 2 students wrote that they liked the interactive activities, and one of those expressed that it was good to have these timetabled as separate from main lectures.

- Jeg likte at noen av dagene var interaktive, men det var bra at disse var noe adskilt fra «vanlige forelesninger». Interaktive timer kan ofte bli litt uoversiktlige og slitsomme. Hvis dette kommer uplanlagt zoomer jeg bare ut. Hvis jeg er forberedt er det lettere, og gøyere.
- Jeg likte de fire timene hvor vi jobbet med tankekart om top-down prosessering.

In general comments on the lecture module, 3 students suggested expansion of classroom discussion.

- More discussion during lectures, less online lectures
- Mer diskusjoner i forelesningene.
- Det jeg likte best var workshopen om oppmerksomhet, fordi det hjalp veldig med å få en oversikt over temaet og se sammenhenger. Tror det kunne vært bra å ha flere tilsvarende aktiviteter!

PART B3 - Assessment of laptop ban during live lectures

Summary and action plan:

Banning laptops during lectures was considered as neutral or positive by about \(\frac{3}{2} \) students, with twice as many expressing a positive than negative opinion. However, a small minority of students perceived it as detrimental. Action to be taken: Continue with the laptop ban as an initial policy but allow individual students to resume using their laptops if requested.

Survey outcomes are now presented in more detail.

The majority of students (78%) had either "no strong opinion" (38%) about a classroom lap top ban in the lecture module by Mark Price and during the project conference days, or liked it and considered that "it helped with my learning process" (40%). A minority of 17% did not like it and considered that it "hindered my learning process".

In free-text comments on the whole lecture module, 3 students wrote that they liked the no-PC rule in lecture classes ("The no-PC rule was cool"; "Jeg lærte også veldig mye av at vi måtte skrive for hånd."; "I was very satisfied with your solution on the emneoppgave conference and the laptop ban. I know some students dislike this as they feel it is unnecessary, or perhaps limiting them, but I know that a lot of students use their phones and laptops checking their social media etc. I am also one of those, and these activities during class can be very distracting. People might be reluctant to the change, but I feel it's a very useful tool. Sometimes we need to be pushed out of our comfort zone in order to perform better, and I experienced a huge improvement in the emneoppgave conference in both focus and participation from the other students.")

On the other hand, 4 students expressed strong views that the rule was unhelpful as outlined below.

- Jeg likte heller ikke foreleser sitt forbud mot PC-bruk i forelesningene. Det er svært ulikt hvordan man lærer best. For min del lærer jeg definitivt best av å kunne ta detaljerte og raske notater, og da trenger jeg PC. Jeg mestrer ikke å ta notater for hånd av flere grunner og notatene mine ble derfor dårlige. Hadde lite utbytte av disse i etterkant.
- PC i forelesninger: jeg likte at det ble en ro under forelesningen, som man ikke får om pc er lov, men jeg klarer ikke å notere hurtig nok til å få med alt jeg vil av det som blir formidlet og notatene mine blir rotete og ufullstendige. Det var også vanskelig å bruke de når jeg skulle øve til essayene o.l. Derfor foretrekker jeg å skrive på pc.
- Jeg har bedre oversikt og bedre struktur på arbeidet hvis jeg noterer på PC.
- Først synes jeg det var helt greit å ikke benytte data i forelesningene, og tenkte at dette kan være fordelaktig med tanke på konsentrasjon osv. Men jeg synes det var veldig vanskelig å ta godt notater. Jeg følte jeg gikk glipp av mye fordi det tar lang tid å skrive for hånd, og fordi jeg måtte skrive utfyllende setninger for å forstå notatene i ettertid og dermed gikk glipp av det du sa etterpå. Når jeg leser forelesningsnotater jeg har tatt i andre forelesninger og sammenlikner med power pointen foreleser har lagt ut, ser jeg at jeg har fått med meg mer enn jeg klarte i dine forelesninger, i tillegg til at notatene er mer forståelige. Jeg mener at vi er ansvarlige studenter, som selv bør kunne gjøre det som er nødvendig for å få så mye som mulig ut av forelesinger uten å bli bedt om å la våre å bruke PC. Likevel er jeg enig i at det kan være et godt initiativ, som er fordelaktig for mange.

PART B4 - Relative contribution to student learning from different teaching activities and resources

Summary and action plan:

Learning activities that students most consistently rated as contributing to learning were the live and online lectures, along with the teacher's written lecture summaries. Examples of past essay questions and answers were highly rated, though not as much as the previous semester. Compared to the previous semester, there was a marked drop in percentage of students who rated text book reading, the teachers reading guides for the text book, or journal articles as useful. By contrast, discussion both outside and inside the classroom were more highly rated than before. The data do not indicate how important each activity is for the students, only whether it was useful at all. Action to be taken: Future surveys need to improve the wording and response option on this question. If low ratings for text book and journal reading replicate in future semesters, this will need to be addressed.

Survey outcomes are now presented in more detail.

One question asked "Which activities and resources on this course have contributed in a useful way to your learning? You can click on as many options as you want." Twelve different activities and resources were listed. In the following table, these are listed in order of % students who chose the item as contributing. Data from the previous semester is listed alongside by comparison.

	This	Last
	semester	semester
Online lectures	89%	81%
Live lectures	81%	81%
My lecture summaries	81%	74%
Examples of past essays questions, and past essay answers	64%	81%
Discussion with other students outside classroom	64%	38%
Classroom based activities	47%	23%
Recommended reading in text book	45%	72%
Classroom practice of essay plans	43%	30%
My reading guides	40%	64%
Recordings of live lectures	30%	-
Recommended reading of journal papers	23%	60%
Reading that is not part of the recommended course pensum	6%	17%

Responses indicate that both live and online lectures, along with the teacher's written lecture summaries, were most consistently rated as contributing to learning. Examples of past essay questions and answers was highly rated, though not as much as the previous semester. Compared to the previous semester, there was a marked drop in percentage of students who rated text book reading, the teachers reading guides for the text book, or journal articles as useful. By contrast, discussion both outside and inside the classroom were more highly rated than before.

The data do not indicate relative importance of each activity for individual students, only whether each activity was considered useful at all. Future surveys therefore need to improve the wording and response option on this question. If low ratings for text book and journal reading replicate in future semesters, this will need to be addressed.

PART B5 - Free text comments on the organisation and content of this lecture module

Summary and action plan:

- Students varied greatly in which themes they reported liking most or liking least. Action to be taken: The topic of consciousness will be revised to make it more accessible to a broader range of students.
- Many students praised the lecturer's enthusiasm and pedagogic commitment.
- Many students expressed that they liked the organisation, structure, variation, progression and integration of the module, including online resources such as reading and summaries.
- A minority reported finding the course too difficult and/or badly organized, including the need to keep up with online lectures in order to follow live lectures. Action to be taken: Learning goals need to be further clarified and simplified, and the sequential and interrelated interweaving of live and online lectures needs to be clearly stressed at the start of the course (and reinforced with more obligatory online guizzes to encourage students to keep up with online lectures).
- Many commented that the course was intense and hard work. Some suggested they were unused to this, or that clashes with other courses were problematic. Action to be taken: The problem of students attempting to take multiple courses during the professional study needs to be addressed by the Faculty. Students also need to be mentally ready for the intensity of the course.

Survey outcomes are now presented in more detail.

Students were invited to make free-text comments in response to three questions:

- What did you like best about the organisation and content of my lecture course? What themes did you find most interesting? (Write in Norwegian if you want)
- What did you most dislike about the organisation and content of my lecture course? What themes did you find least interesting? (Write in Norwegian if you want.)
- Do you have any other comments or suggestions?

Responses were grouped thematically. Some responses are already integrated with multiple choice responses in the sections above. Some were more directed at the course in general and are incorporated into feedback from the general course survey. Remaining responses can be summarised as follows:

• All major themes from the module were given likes by some students, and opinions diverged widely over favourite and least liked lectures. Attention and mental imagery were some of the most popular topics, but also unpopular among some students. Some

- students found the topic of consciousness difficult or uninteresting although an equal number were positive about this theme.
- In response to what they liked best about the lecture module, 5 students made comments appreciating the lecturer's enthusiasm and pedagogic commitment. In their "general comments" about the module, 9 students again made similar complements.
- Many students (n=15) expressed that they liked the organisation, structure, progression and integration of the module, including online resources such as reading and summaries. Some commented that they liked the variation in teaching methods. Sample quotes included:
- Jeg likte at temaene og timeplanen hadde en tydelig og forutsigbar struktur som jeg kunne følge både live
- I really liked that you have put in online material and that you had planned for us what we had to prepare to the lectures. It made everything more organized.
- Progresjonene på de ulike temaene syns jeg har vært bra. Har ingenting å utsette på innholdet. Anbefalt litteratur har også vært ok.
- Jeg likte hvordan temaer ble knyttet sammen, slik at man kunne se sammenhengen mellom dem. Og jeg likte fokuset temaet på fraksjonering, slik at man kunne se mer detaljert på begreper.
- What I liked best about the organisation was the availability of the many useful online sources such as summaries, lecture slides.
- Jeg likte veldig godt variasjonen i undervisningsmetoder. Det hjelper å høre ting på ulike måter, og å bearbeide stoffet på litt forskjellige måter.
- By contrast, organisation of course material was unclear for 4 students. Comments here included lack of clarity in learning goals, and the need to keep up with online lectures in order to follow live lectures.
- Eight comment reported finding the course too difficult, or the lecture content to be badly explained or badly organised. It should be noted that, from the multiple choice feedback, these students are in a small minority.
- Many comments (n=16) described the course to be somewhat intense or very intense. However, it should be noted that many comments suggested the students found the course hard work, but not impossible to follow. In addition, timetable clashes or motivational issues played a role: One student specifically commented that they had problems following as they were also attending other courses. One commented they were unused to this level of intensity so early in the semester. It should also be noted that 2 students specifically commented that they *liked* the intensity of the course.
- Two students liked the guizzes and asked for more. Two students praised the assessed essays (e.g., "The personal feedback on essay's, was something I learned most from.")
- In response to the question on "What did you most dislike", six students specifically said they had no complaints (e.g., "I didn't dislike anything"; "I liked everything!") and six left this field blank.

Overall action plan: Planned revisions and ongoing challenges

A general challenge for design of this course is heterogenous student backgrounds in terms of previous learning, along with different levels of commitment and ability. In particular, it is difficult to facilitate accessibility of some parts of the course to weaker students without diluting the appeal of the course to students with stronger previous background and stronger engagement. Teachers and program coordinators also need to combat a tendency for some students to enter the semester with unrealistic expectations of workload, and preexisting commitments (e.g., holidays, participation in other parallel courses) that impair focus on the course.

Results of the evaluations also highlight the following further points in regard to future course planning.

- 1. The course should continue to develop online resources, including lectures and feedback quizzes. Some live lectures should be retained as a mix of formats may be optimal.
- 2. Ungraded assessment, in the form of obligatory assessed essays, should be continued in view of its perceived learning advantages for the majority of students. However, obligatory online assignments/assessments (e.g., quizzes) should be expanded further to ensure all students cover course syllabus.
- 3. We should continue to expand non-lecture classroom activities, but students need increased encouragement to attend classroom activities.
- 4. Learning goals need to be further clarified and simplified, and the sequential and interrelated interweaving of live and online lectures needs to be clearly stressed at the start of the course (and again reinforced with more obligatory online quizzes to encourage students to keep up with online lectures).
- 5. The problem of students attempting to take multiple courses during the professional study needs to be addressed by the Faculty. Students also need to be mentally ready for the intensity of the course.
- 6. There should be reduced repetition of basic themes during the lecture module on memory.
- 7. The topic of consciousness will be revised to make it more accessible to a broader range of students.
- 8. Revised procedures for the student's project conference were successful and should be maintained.
- 9. Students need to be better pre-warned and prepared that passing their semester research papers (emneoppgave) may require a higher standard than they are used to.
- 10. Students should not be sent course emails outside working hours because students often sleep with email activated on their cell phones.
- 11. Future online lectures can be presented only as streamable Vimeo lectures and Powerpoint format can be discontinued.
- 12. Future surveys need to discover why there are still technical problems for a minority of students after introducing live streaming of lectures.
- 13. A classroom laptop ban during one lecture module should be retained as an initial policy, but we should allow individual students to resume using their laptops if requested.