

# EMMERAPPORT 2015 VÅR (FARM 211)

March 31, 2016

## 1 Lecture assessment of implementation

### 1.1 Practical implementation

This was the first time that FARM211 had a different syllabus from KJEM210. The course was organized as follows. The course remained as a 10 credits one, which contained 7 credits of lectures and 3 credits of lab course. In the lectures, the course covered basic contents in physical chemistry, which included three parts: thermodynamics, molecular in motion, and macromolecules. The pharmacy students joined the same lectures as chemistry students for thermodynamics. This part of lectures accounted for 75% curriculum. The rest 25% of curriculum was offered separately from KJEM210. The lab course was remained the same as it was offered in KJEM210. This included 3-day lab work on conductivity and relevant subjects.

The lectures were offered three times per week with 2 hours for each lecture and lasted 16 weeks: 7 weeks (24 Aug. — 15 Oct.) for thermodynamics; 2.5 weeks (19 Oct. — 2 Nov.) for molecular in motion and macromolecules, and the rest for exercises (joint class with KJEM210). One workshop for pharmacy students was added after the lectures, otherwise the plan had been successfully implemented.

## 1.2 Failure rate and dropout

In total, there were 21 students registered the final exam, and completed the exam in Nov 2015. Among them, 3 candidates performed poorly and failed. Statistically, the number of failed students is about 14%. No student dropped out during the semester.

## 1.3 Grade distribution

The overview of the grade distribution is as follows: A (3), B (2), C (4), D (7), E (2), F (3). The percentage on each level is presented in Figure 1. The grade obeys nearly a normal distribution with the majority at C and D. I considered the results had objectively reflected the knowledge the students acquired. Fully engaged students were rewarded in the exam.

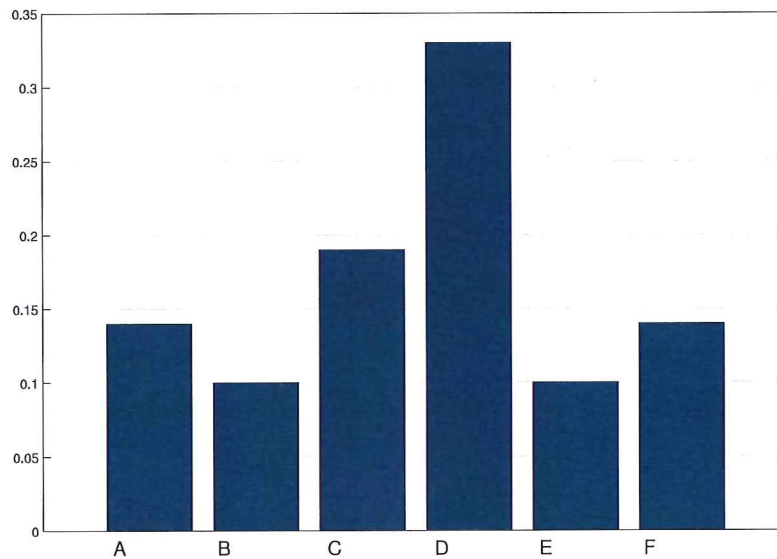


Figure 1: Grade Distribution

## 1.4 Access to relevant materials

The students were asked to sign in MI SIDE for both KJEM210 and FARM211. The course curriculum and lecture notes were available on MI SIDE. Assignments were also published on MI SIDE and answers were given in workshops. The students had information of office number and email address of both lecturers. Questions sent by emails were given prompt responses. Since I gave lectures for FARM295 at the beginning of the semester, the curriculum of later part of the course was available in the middle of the semester. This had caused confusion for some students. Textbook could be purchased in Akademika, and lab manual was available during the lab course.

## 2 Lecture assessment of the regulatory framework

### TEACHING EQUIPMENT AND PREMISES

The lectures with chemistry students were held in Undervisningsrom D302, and in Undervisningsrom D301 after split. Teaching facilities are enough for lectures; however, Undervisningsrom D301 can accommodate more than 100 students and it is too big for only 21 students. It would be better to hold lectures a smaller auditorium for just pharmacy students.

## 3 Lecturer comments on student evaluation

The comments from student evaluation has certainly some valid points, both positive and negative. We specifically addressed few questions in order to understand whether the organization of the course is smooth and effective, whether the calculation exercises are necessary, whether there are desirable outcomes from lab

course. I summarize the comments from students.

Regarding to the organization of the course, the feedback are very divergent. Some of the students thought that pharmacy students were used to the course being taught by many lecturers; others thought it would be better to be taught by one lecturer. The intention to ask this question is due to the essence of the course. I consider that the students has experienced with courses that are consist of many different parts, but there are little connection among the parts. Physical chemistry is unlike to this type of courses since it requires a continuance of understanding. For example, it would not be possible to separate three thermodynamics laws, and the thermodynamics has to be taught sequentially. There are certain advantages if the course is taught by only one lecturer. The students would need less time to accustom themselves to the teaching style, especially the approach to understanding physical chemistry. It should be further considered. In addition, some students expressed positive thinking on the pharmaceutical approach to understand physical chemistry. In the comments, it also reflected that there was not enough cooperation between me and Kristine Spildo. We acknowledge these comments, which will give us space to improve the teaching.

As to the calculation exercises, the feedback was generally positive. There are certain issues remained, for example: the students wanted to work in a smaller group, and requested to publish the answers of the exercises on MI SIDE. I think the study groups can be organized by students themselves. I asked the students to solve exercises independently, and then we discussed the problems in the classroom. Since there are not enough teaching assistants, the workshops were offered in that arrangement. Without further resources, we will have to arrange it as it was.

In general, the students felt challenges in lab courses and the students has difficulties on quantitatively determining physicochemical properties. One specific comment on Lab 1 was addressed by many students. We removed electrochemistry

from the curriculum for pharmacy students, but Lab 1 (conductivity) is related to electrochemistry. Therefore, the students did not learn the knowledge but performed the experiment. This has to be further discussed. We may either put electrochemistry back into the curriculum or design a new lab course.

## 4 Lecturer's overall assessment and Proposals for improvement

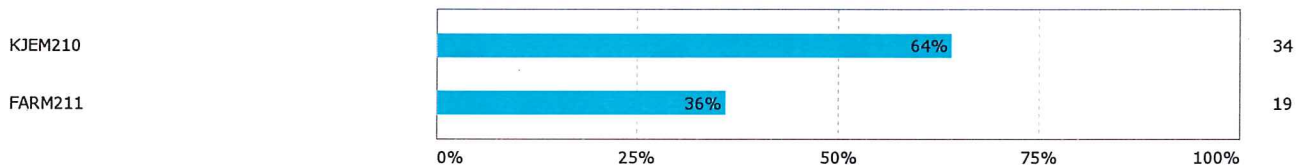
It was the first year the course was rearranged for pharmacy students. The course content did not change significant. We kept the core knowledge in physical chemistry and added some contents that were relevant to applications in pharmacy. Students' performance in the final exam was mostly excellent considering the pre-education in physics and mathematics. At the moment, with the giving resource, the arrangement with two lecturers will stand. We may be more cooperative, such as giving separate introduction course for pharmacy students and let them know the overview of the course arrangement. We consider to adjust the content to students' pre-knowledge. The lab course can be improved with further investment.



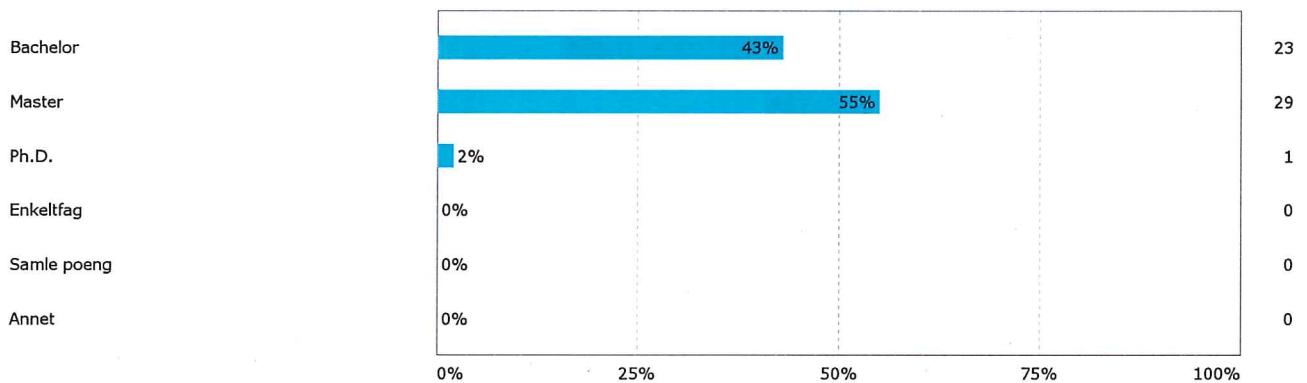


Her presenteres først en samlet evaluering av KJEM210/FARM211. Deretter følger resultater fra samme undersøkelse, men delt inn i svar fra henholdsvis KJEM210- og FARM211-studenter.

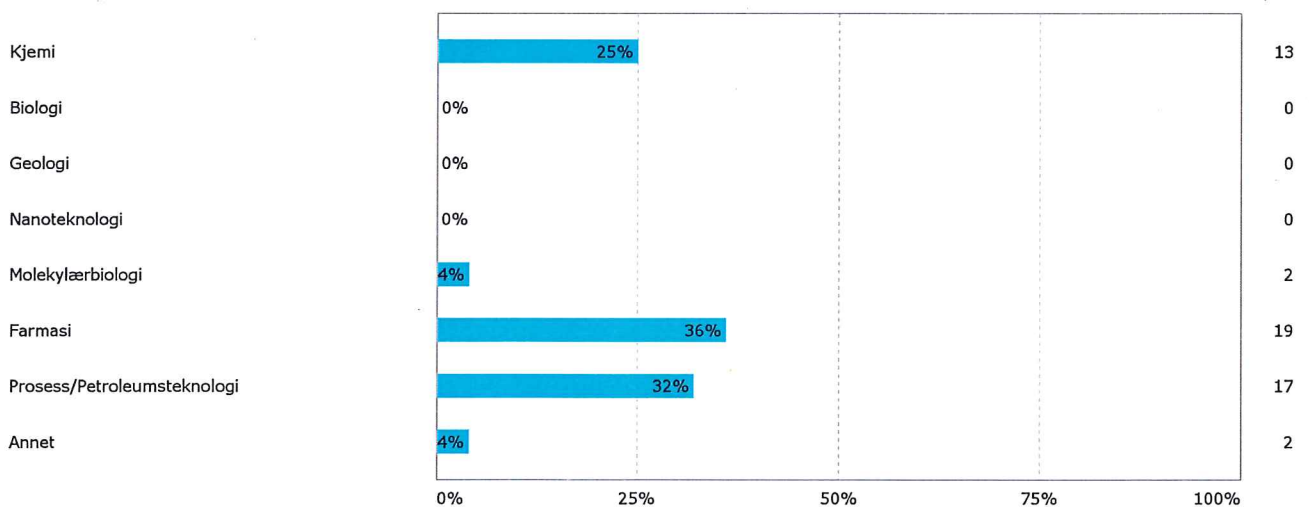
Følger du undervisning i KJEM210 eller FARM211?



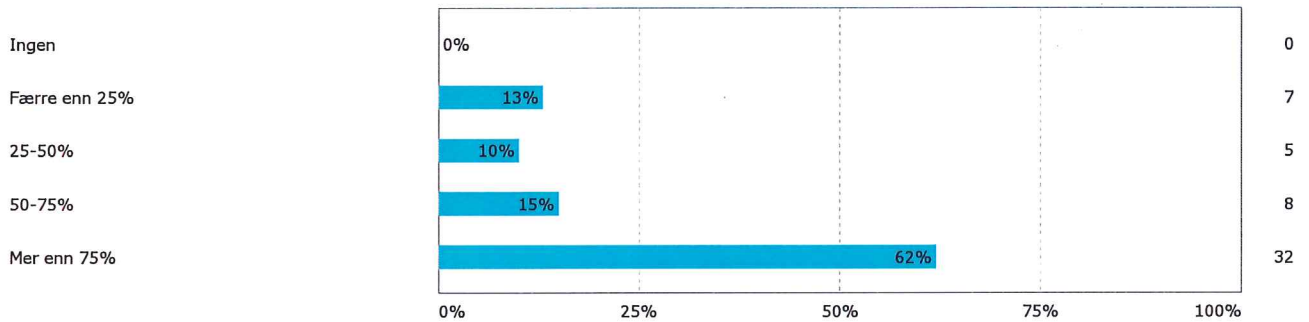
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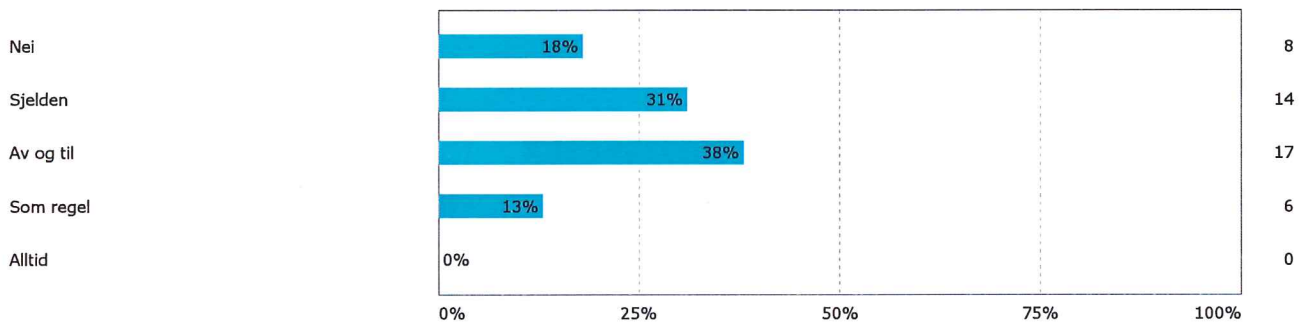
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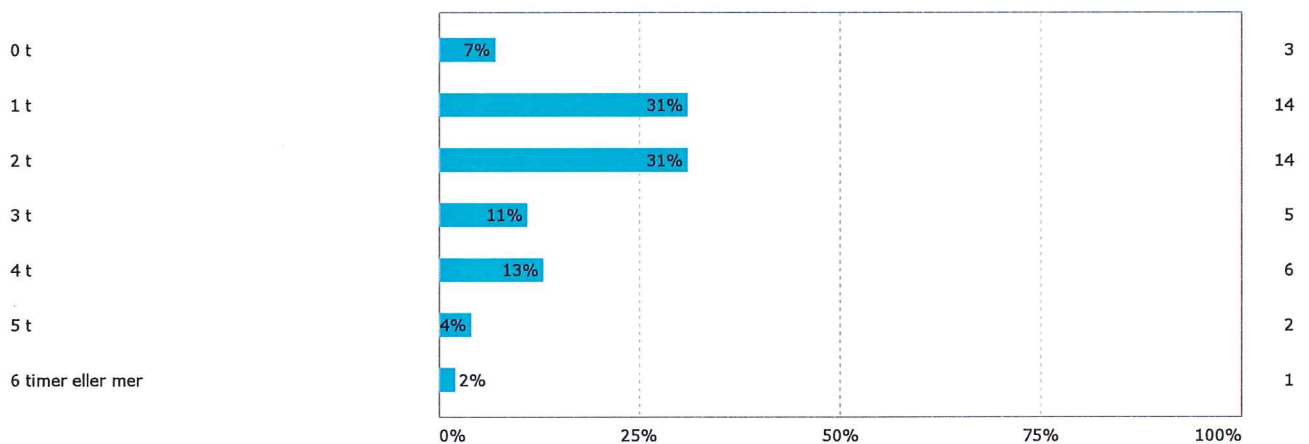
## Hvor stor andel av forelesningene har du fulgt?



## Har du forberedt deg til forelesningene?

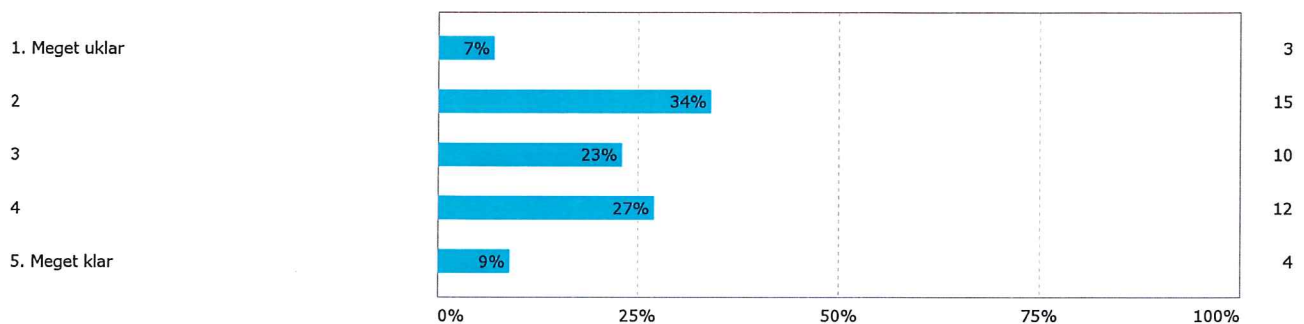


## Hvor mange timer har du brukt til selvstudium (evt. før og etter hver forelesningstime (dvs. per 45 minutter forelesning))?

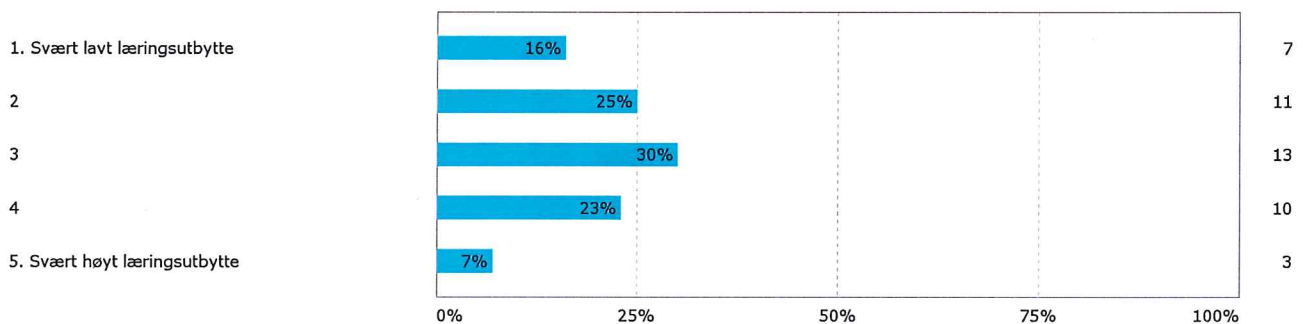




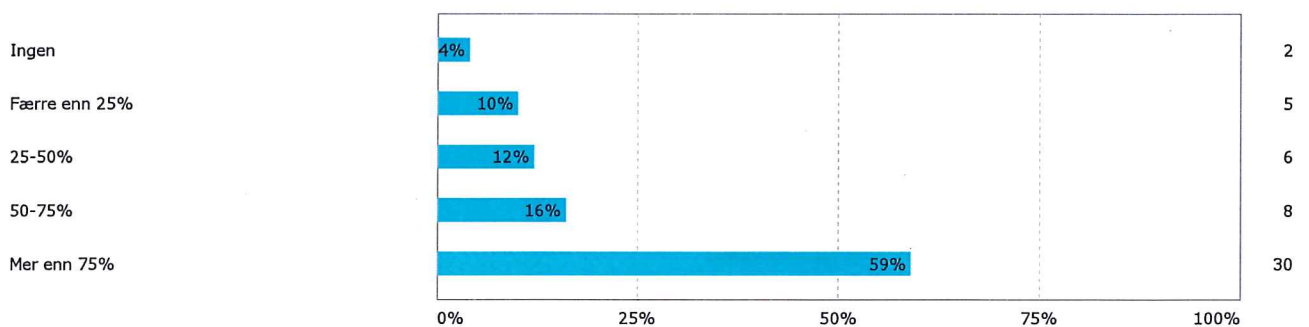
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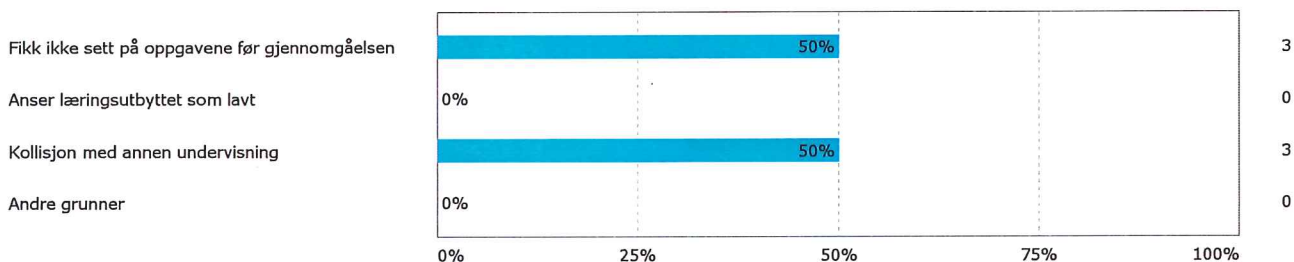
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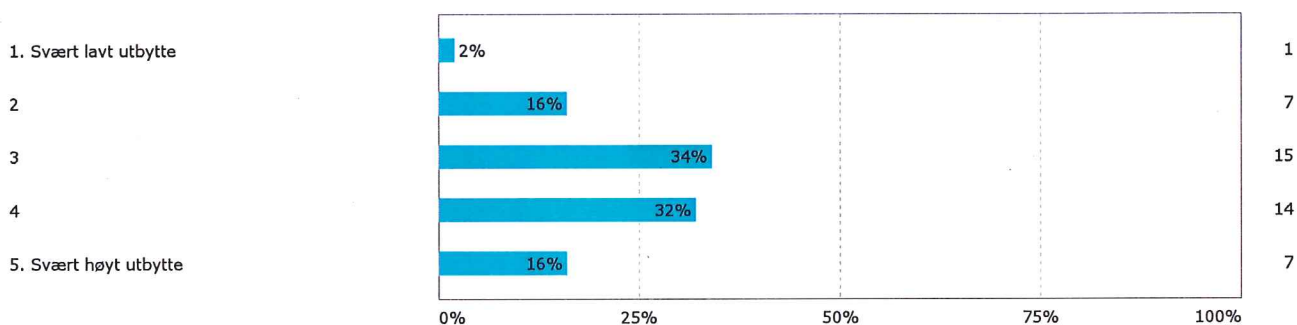
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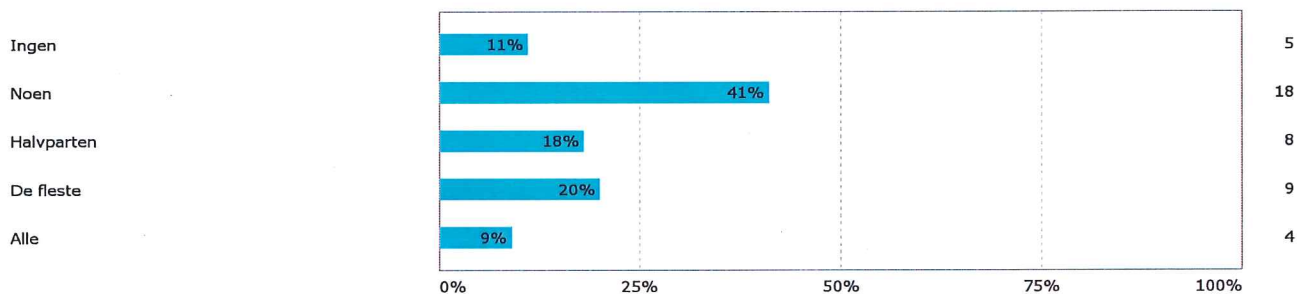
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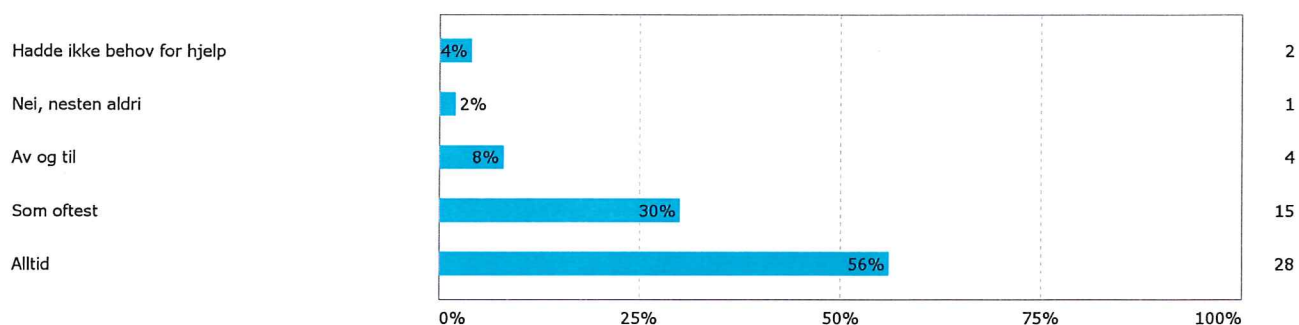
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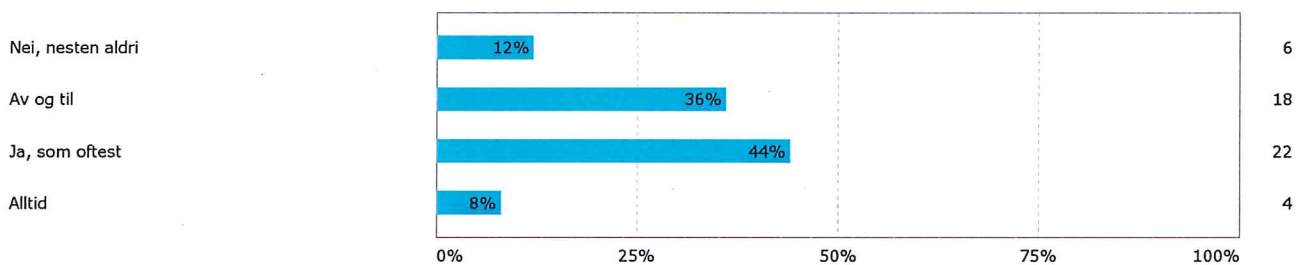
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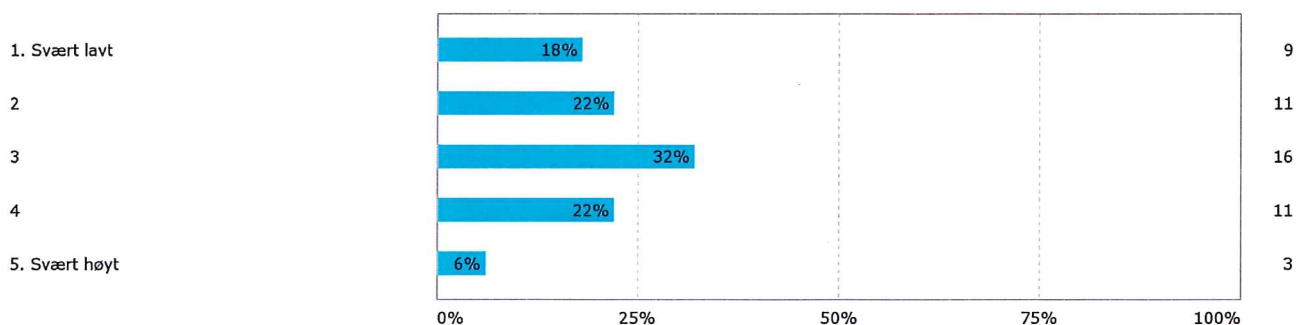
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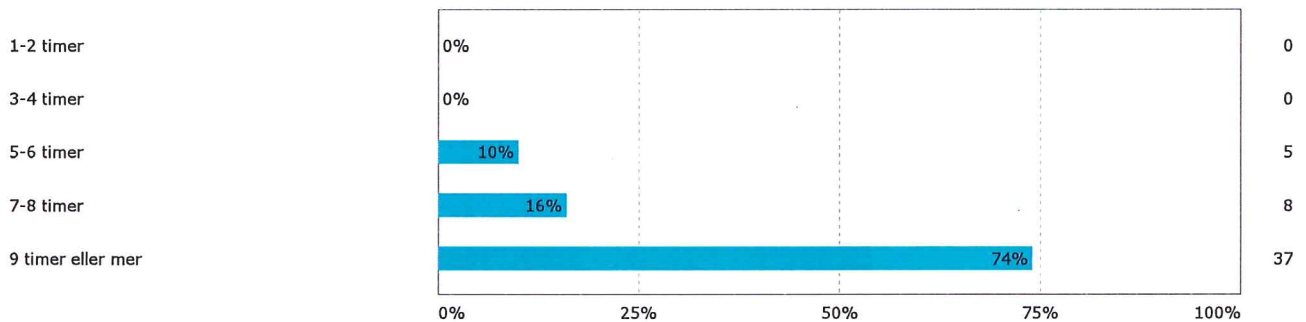
## Ble øvelsene godt forklart av laboratorieheftet?



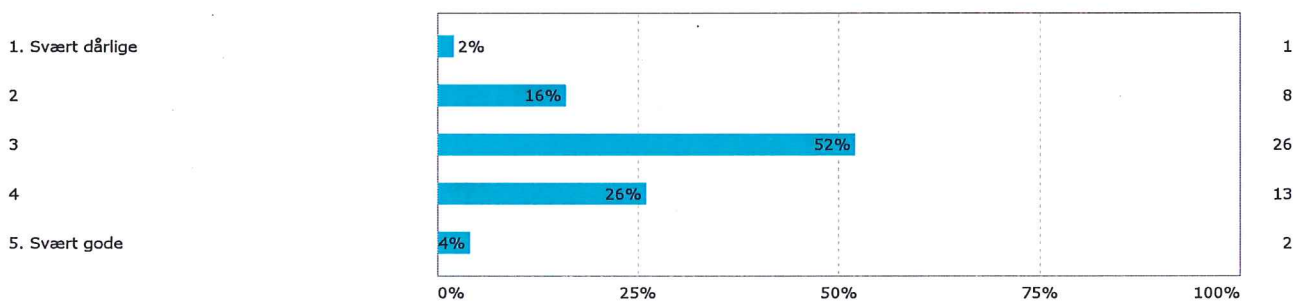
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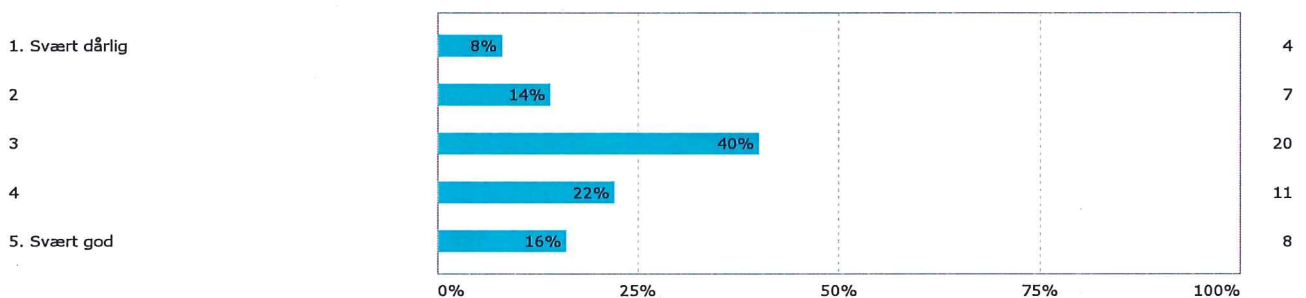
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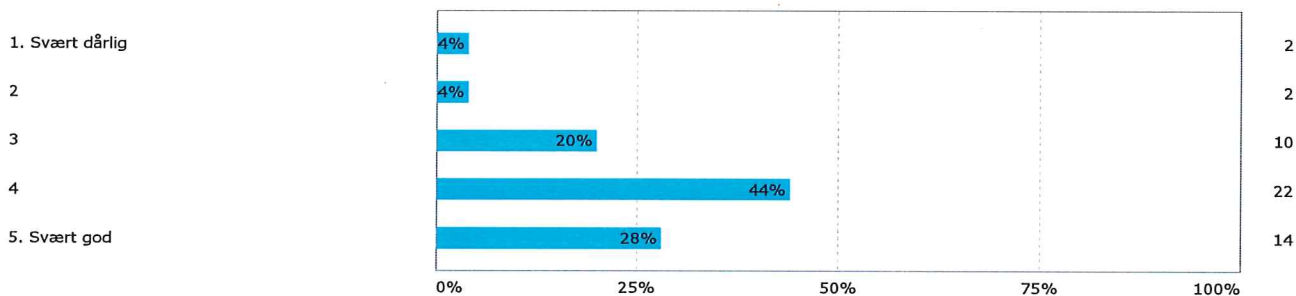
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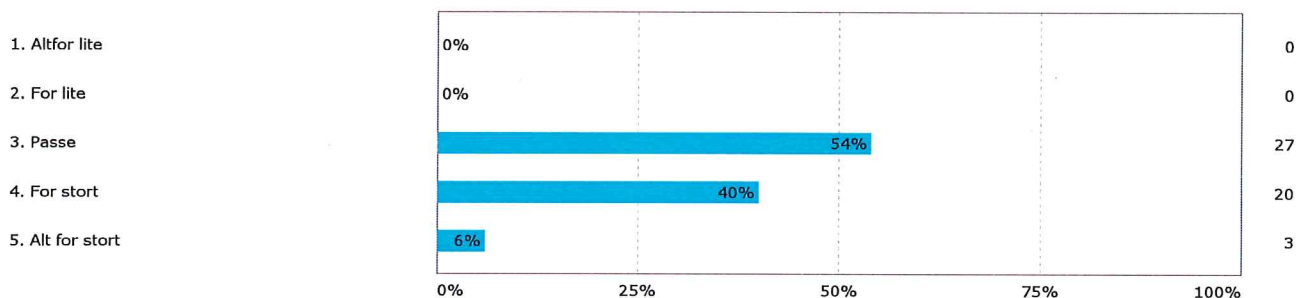
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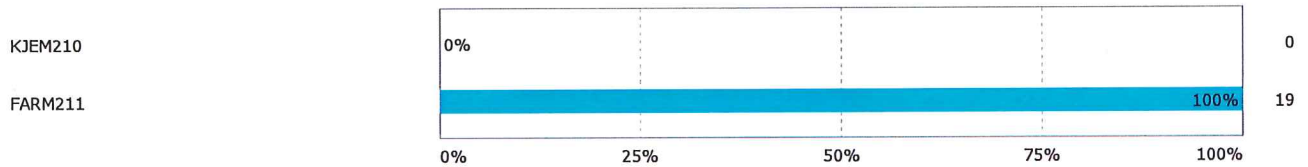


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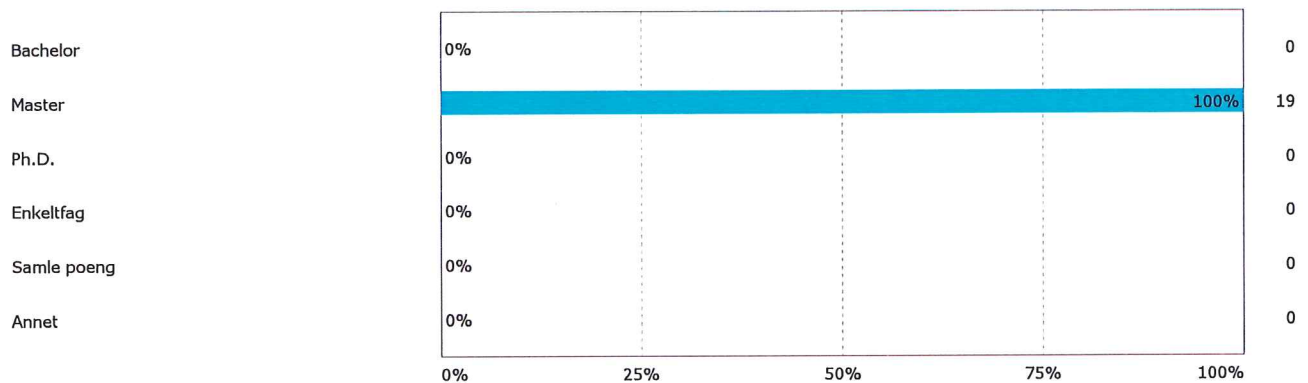


## RESULTAT AV FARMASISTUDENTENES EVALUERING:

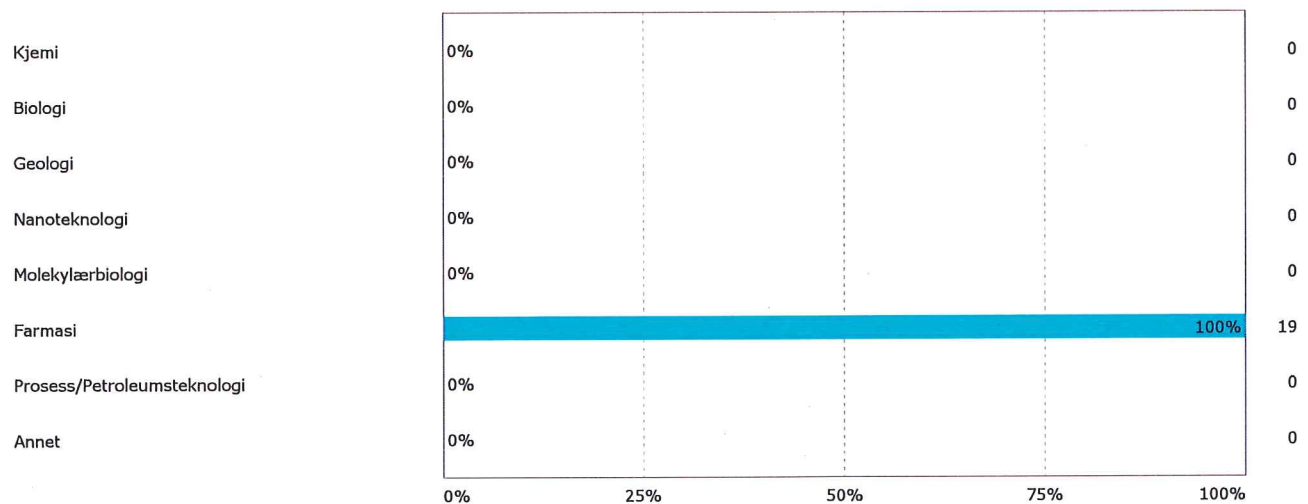
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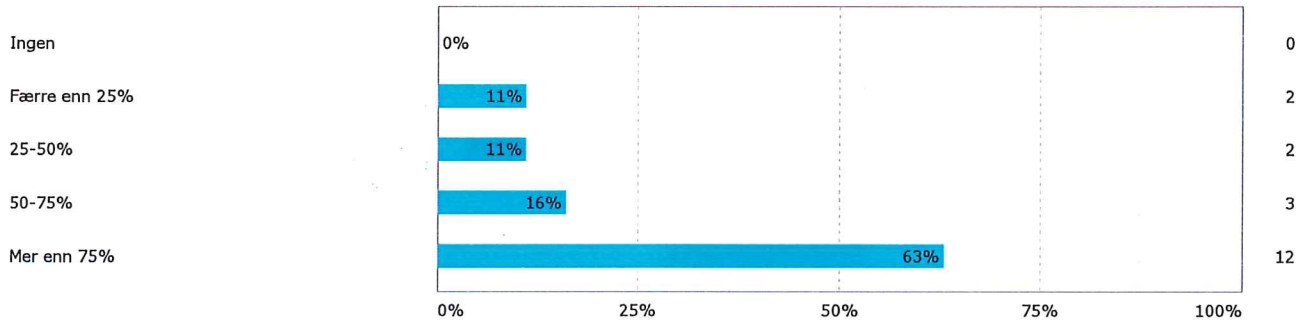


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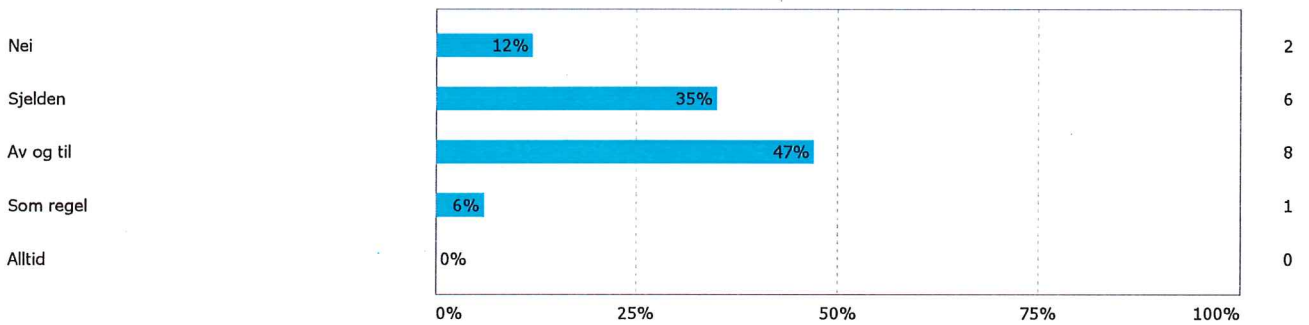




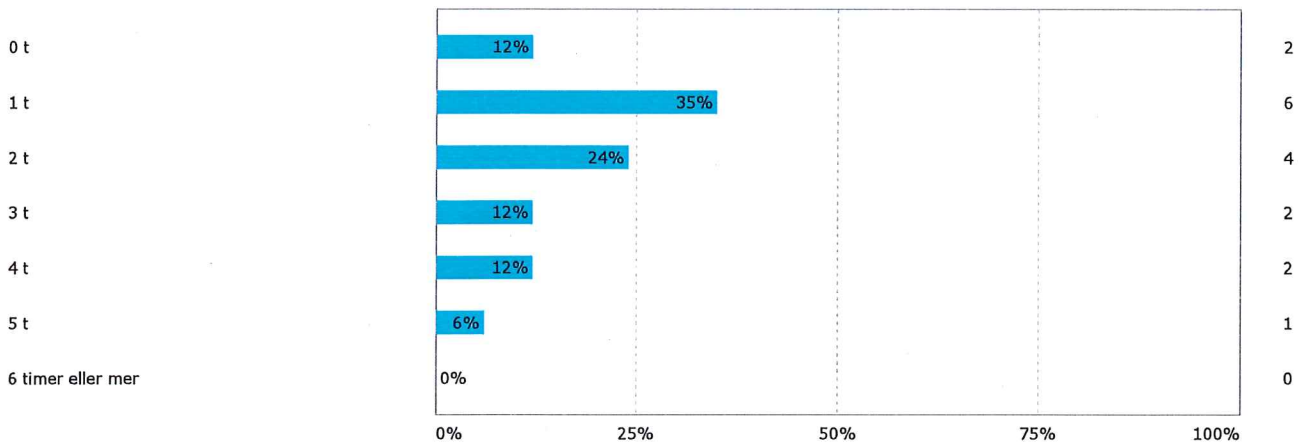
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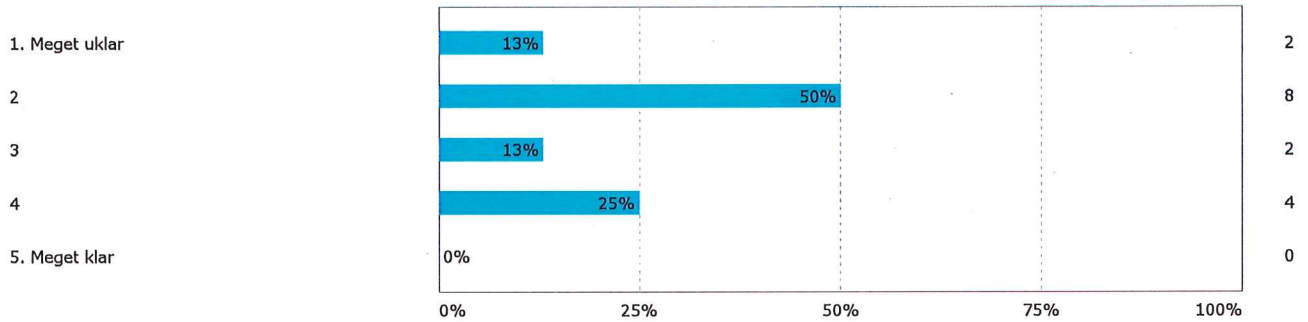
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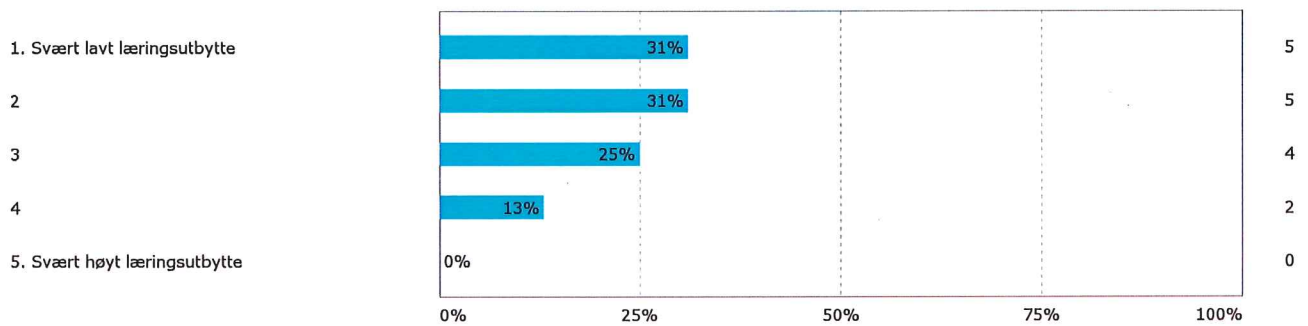
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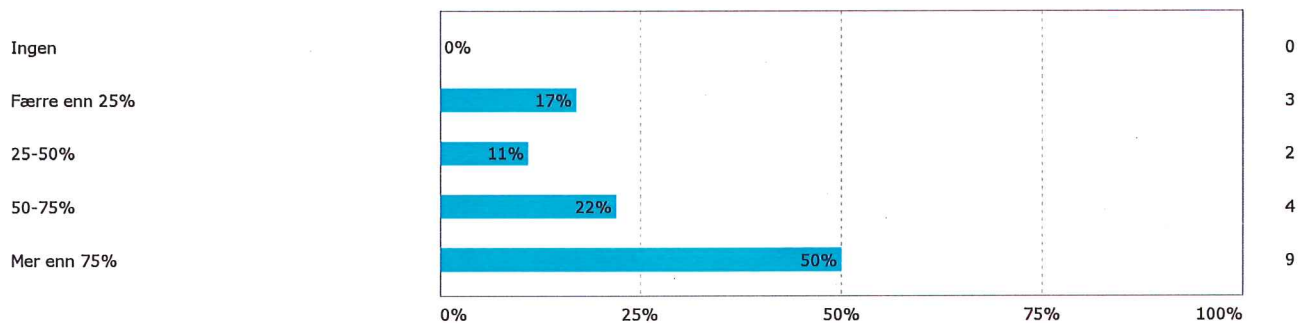
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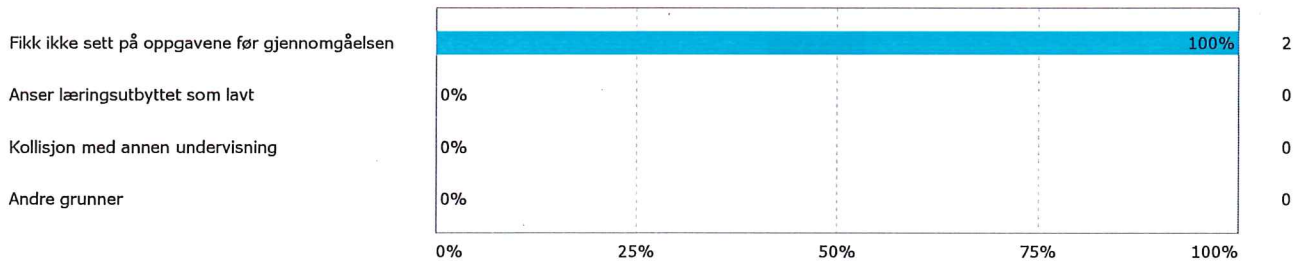
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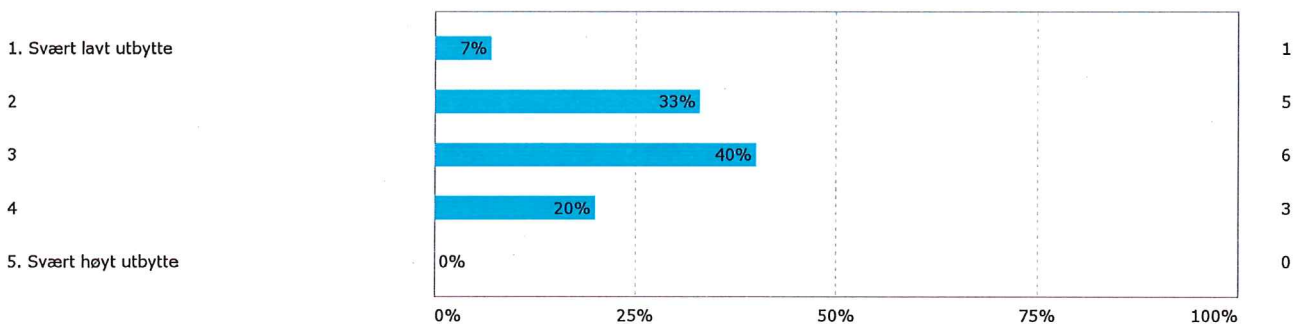
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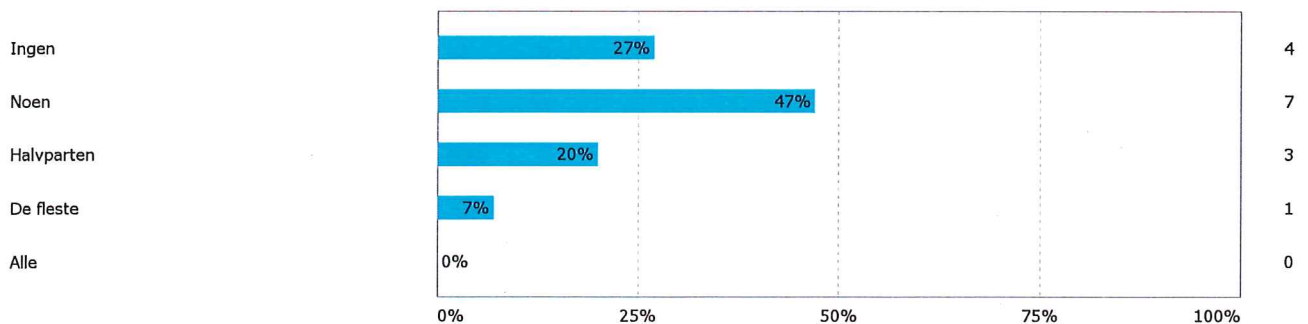
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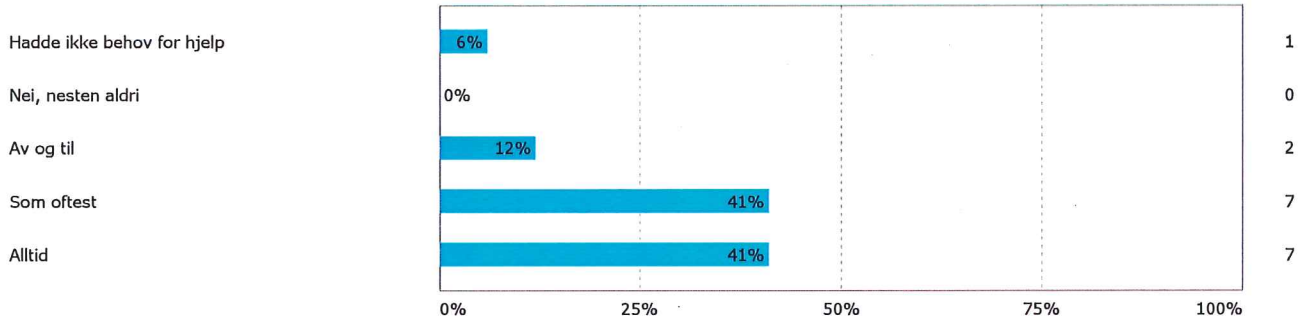
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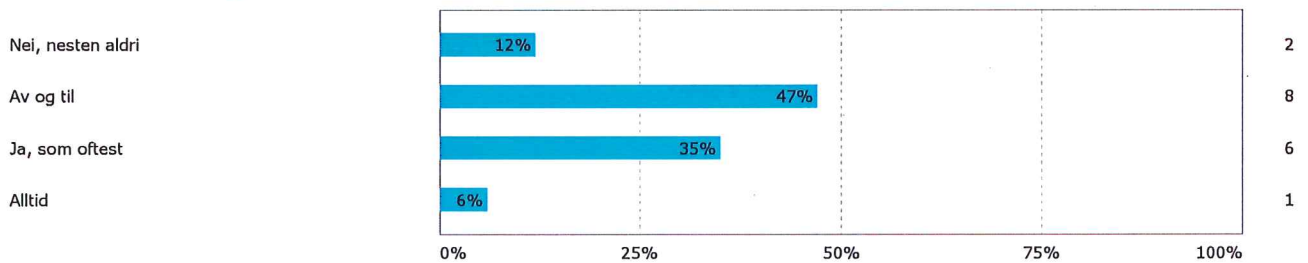
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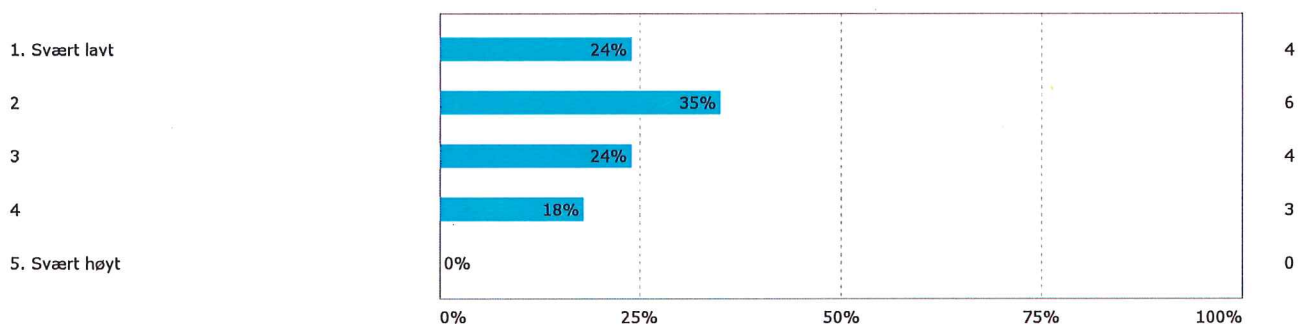
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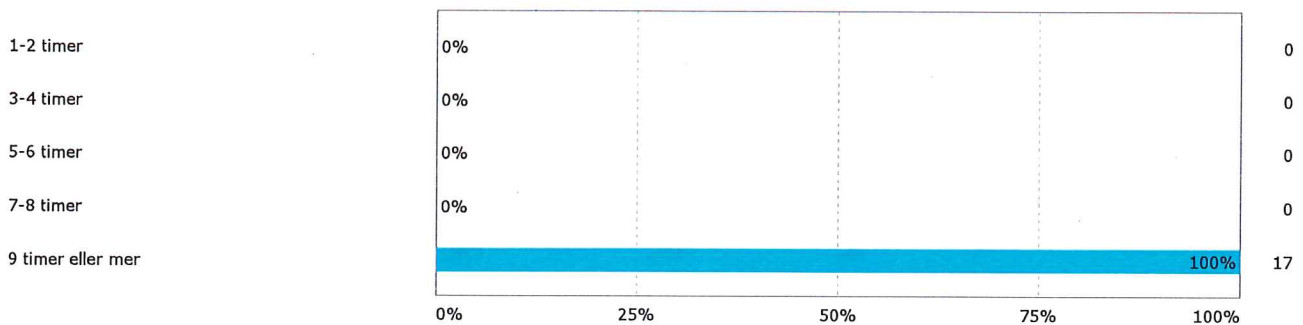
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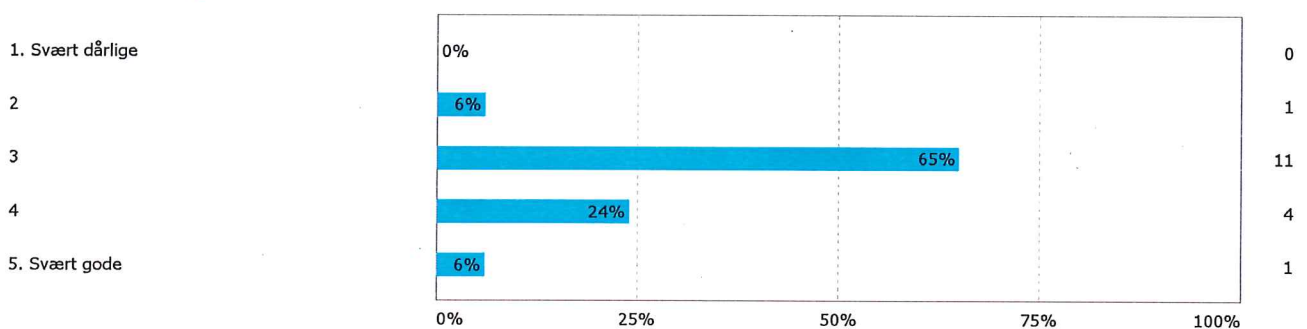
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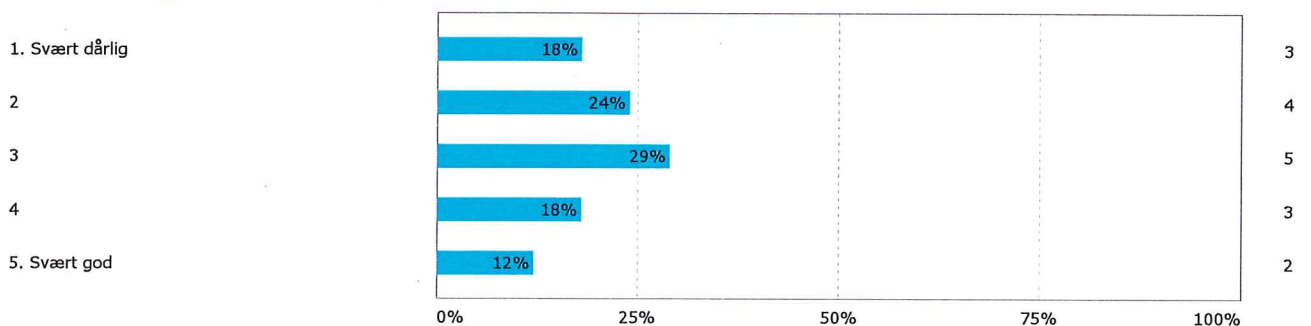
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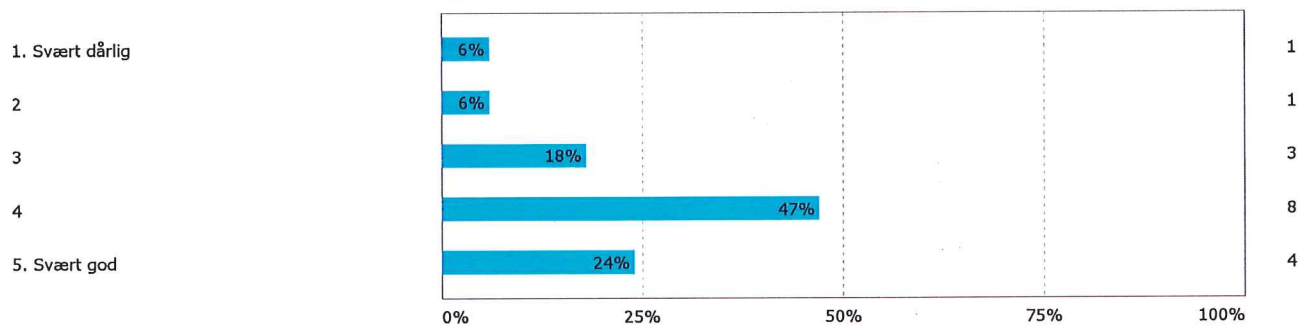
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