

Emergency Remote Teaching during the Covid-19 crisis at Chalmers – how did it go?

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Emergency Remote Teaching (ERT)

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Regular Online Teaching

Hodges et al., 2020

Study period 4 (LP4) – how did it go?

- Student perspective
 - Learning experience – course satisfaction
data from regular course evaluations analysed from QlikView
 - Learning results - passing rates
data from first regular exam analysed from QlikView
- Comparisons:
 - 2020 vs 2019 study period 4
 - Different student groups
 - master program students (MSc and MScEng year 4-5)
 - master of science in engineering (civilingenjör) students (MScEng year 1-3)
 - bachelor of science in engineering (högskoleingenjör) students (BScEng).
- Teacher perspective
 - Teaching experience –
data from teacher survey June 2020

Student learning experience – focus questions from course evaluation

3B: The teaching worked well.

3C: The course literature including other course material supported my learning well.

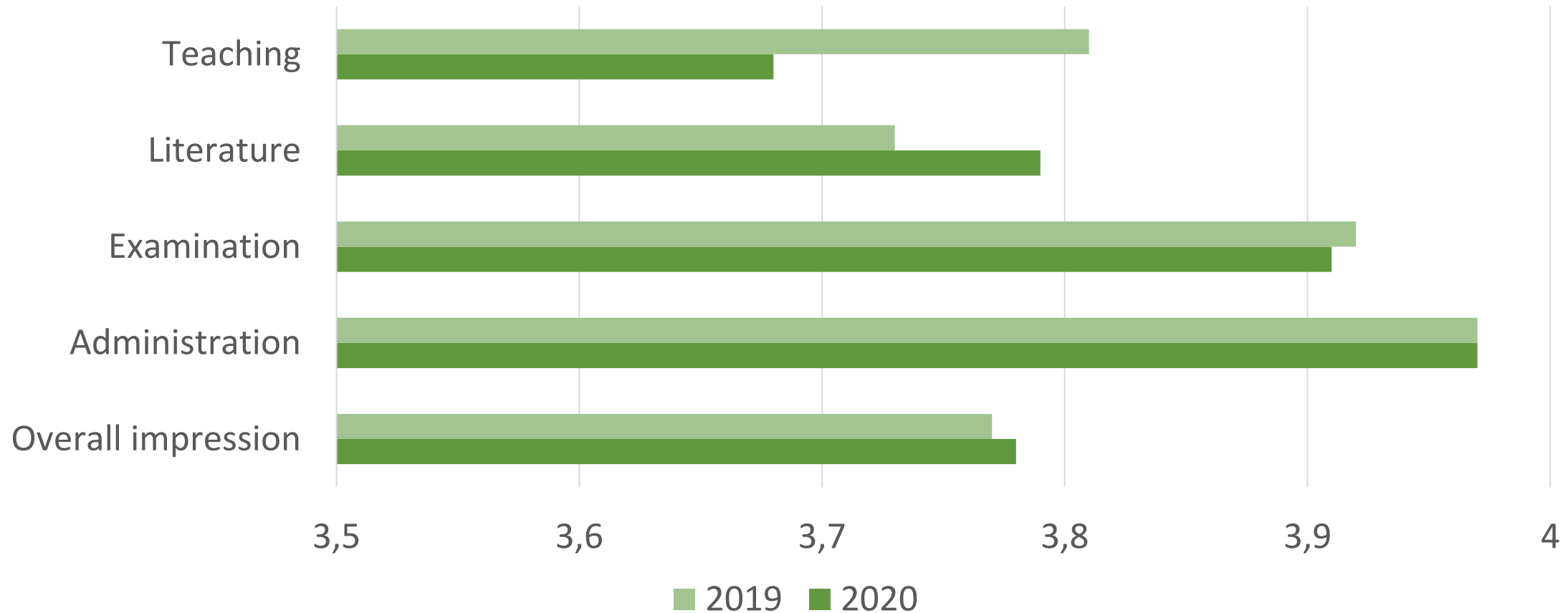
4: The examination (including all compulsory parts of the course: exam, hand-ins etc.) tested if I had reached the learning outcomes of the course.

5: The course administration worked well.

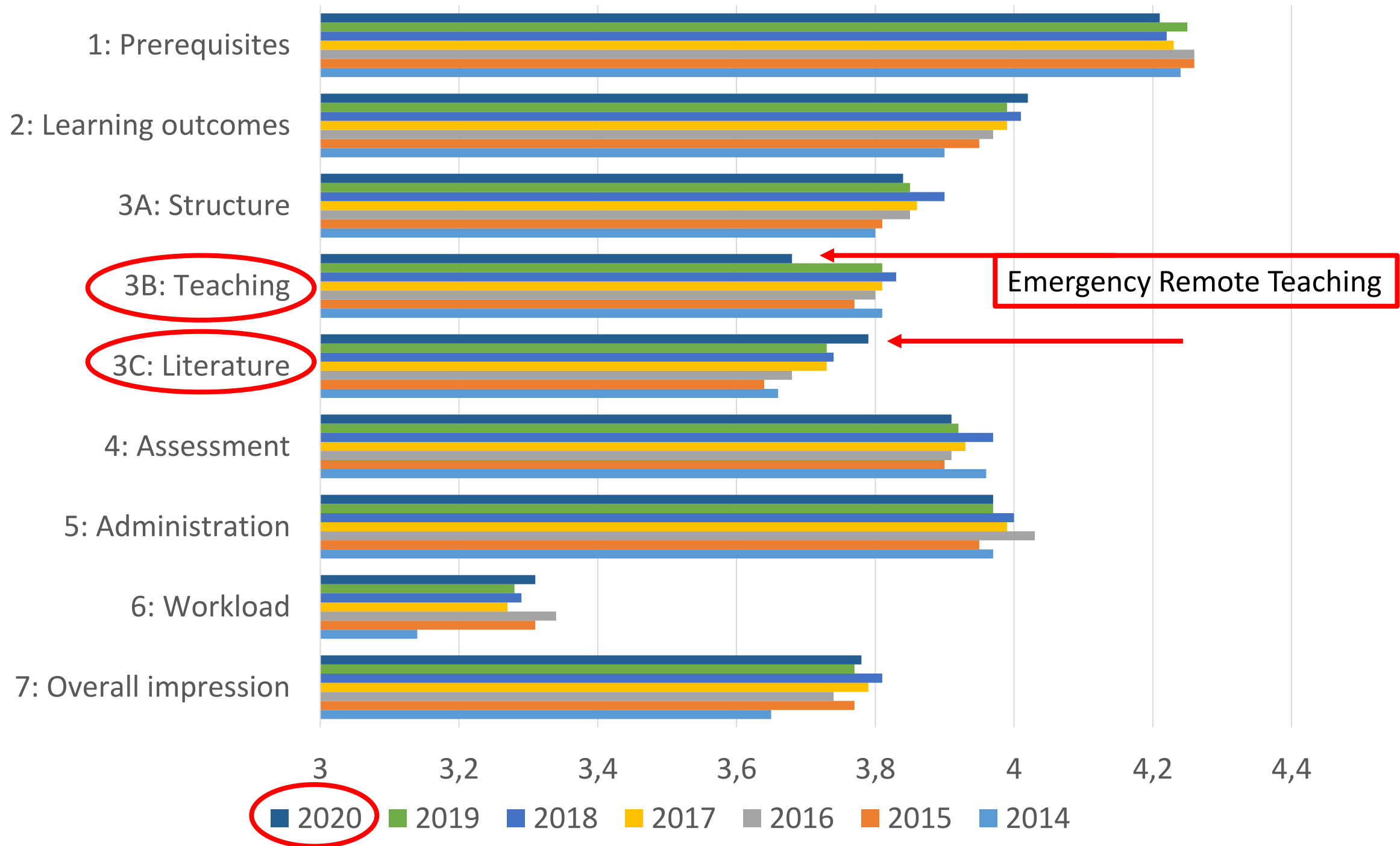
7: What is your overall impression of the course?

Course evaluations LP4 2019 and 2020 (ERT)

all Chalmers courses together (5-level Likert scale)



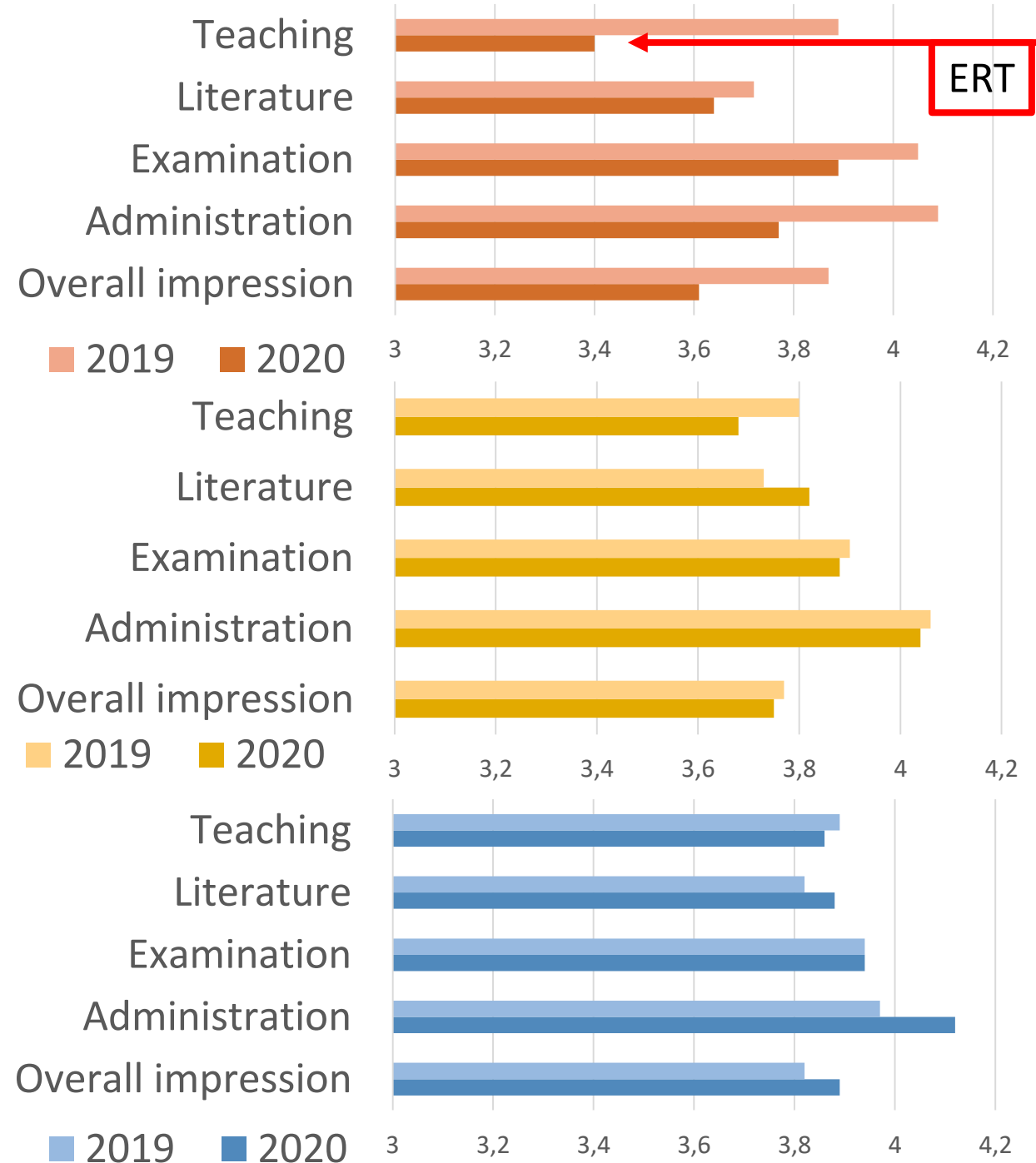
All Chalmers LP4 courses together



B.Sc.Eng. högstskoleing. 180hp
(44 courses LP4 2020)

M.Sc.Eng. (year 1-3) civ.ing.
(71 courses LP4 2020)

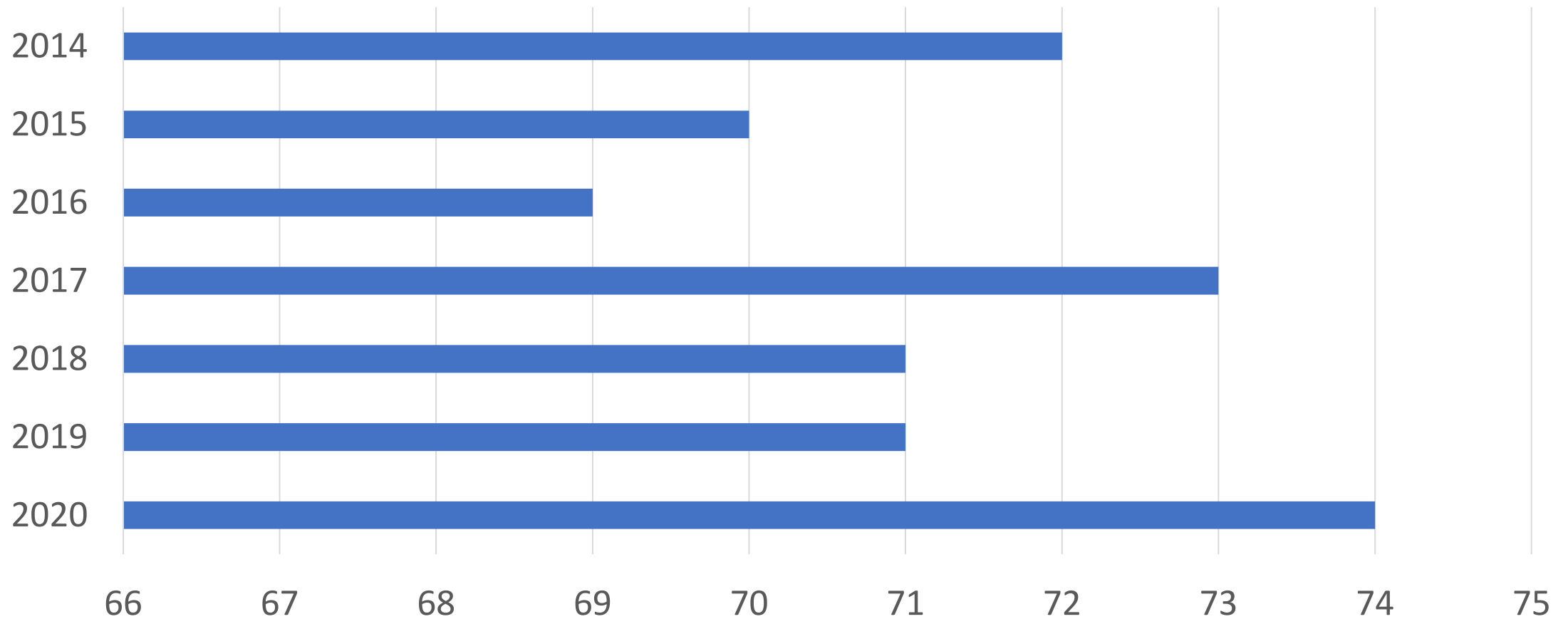
Master programs
(88 courses LP4 2020)



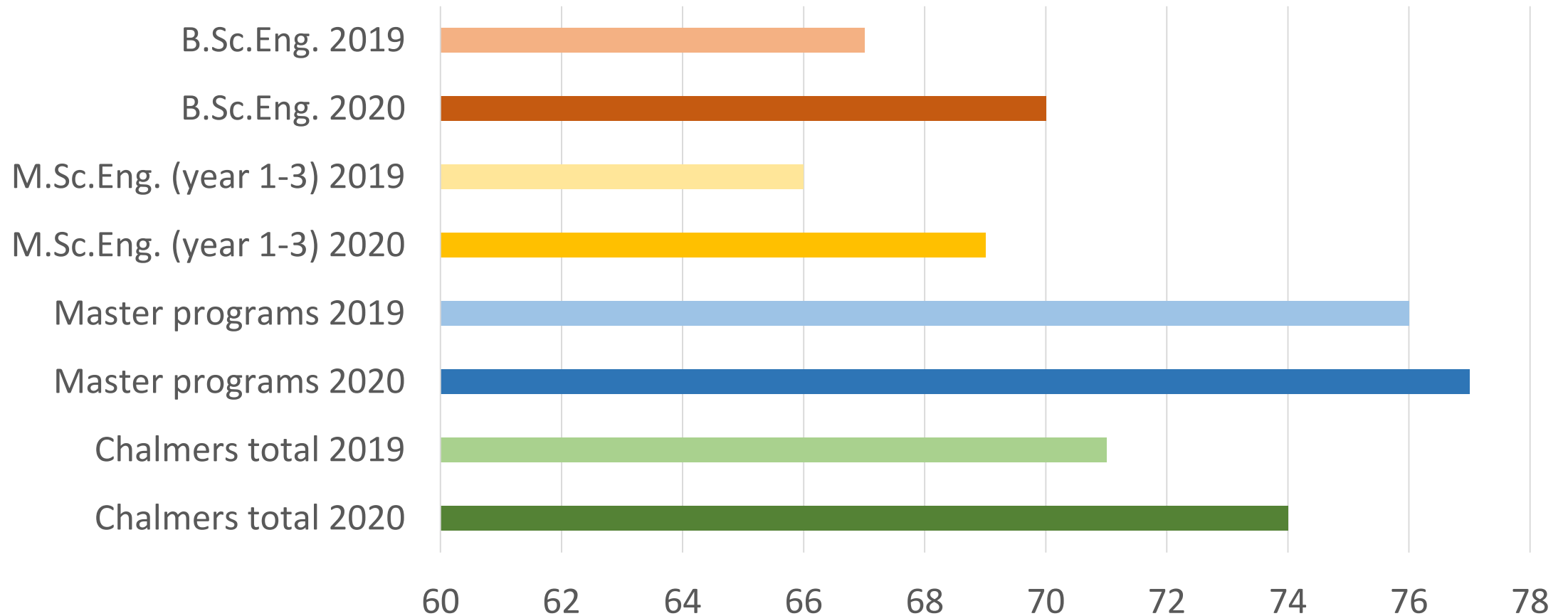
Learning results – passing rates

- LP4 2020 – most final exams Zoom-proctored open-book exams
- LP4 2019 – many final exams on-campus closed-book exams
- Both years – some courses without final exam
- First comparison includes all courses, irrespective of examination method.
- Can passing rates be compared when examination methods change?

Passing rates (%) first regular exam LP4 2014-2019 compared to 2020 (ERT) for all Chalmers courses



Passing rates (%) for different program types



Clues from all Chalmers courses together

Teaching (3B)

- “*The teaching worked well.*”
- lower in 2020 (3,68 versus 3,81).
- lowest since 2014

Literature (3C)

- “*The course literature including other course material supported my learning well.*”
- higher in 2020 (3,79 versus 3,70).
- highest since 2014

Passing rates

- after first regular exam period
- higher in 2020 (74% versus 71%).
- highest since 2014

Clues from different student groups

B.Sc.Eng. (Högskoleingenjör) students

- affected the most
- lower (all items) than B.Sc.Eng. in 2019
- lower (all items) than Chalmers average in LP4 2020

M.Sc.Eng. (Civilingenjör) students (year 1-3).

- affected less than B.Sc.Eng students

Master program students

- experienced the situation comparatively well

New questions to investigate...

Subjects:

- differences between programs and/or departments?

Next try:

- Same trends for study period 1 (LP1) 2020?

Teaching methods:

- work best for learning = most appreciated?

Course literature:

- choice, format and/or utilization most important?

Passing rates:

- differences between examination methods?

Teachers:

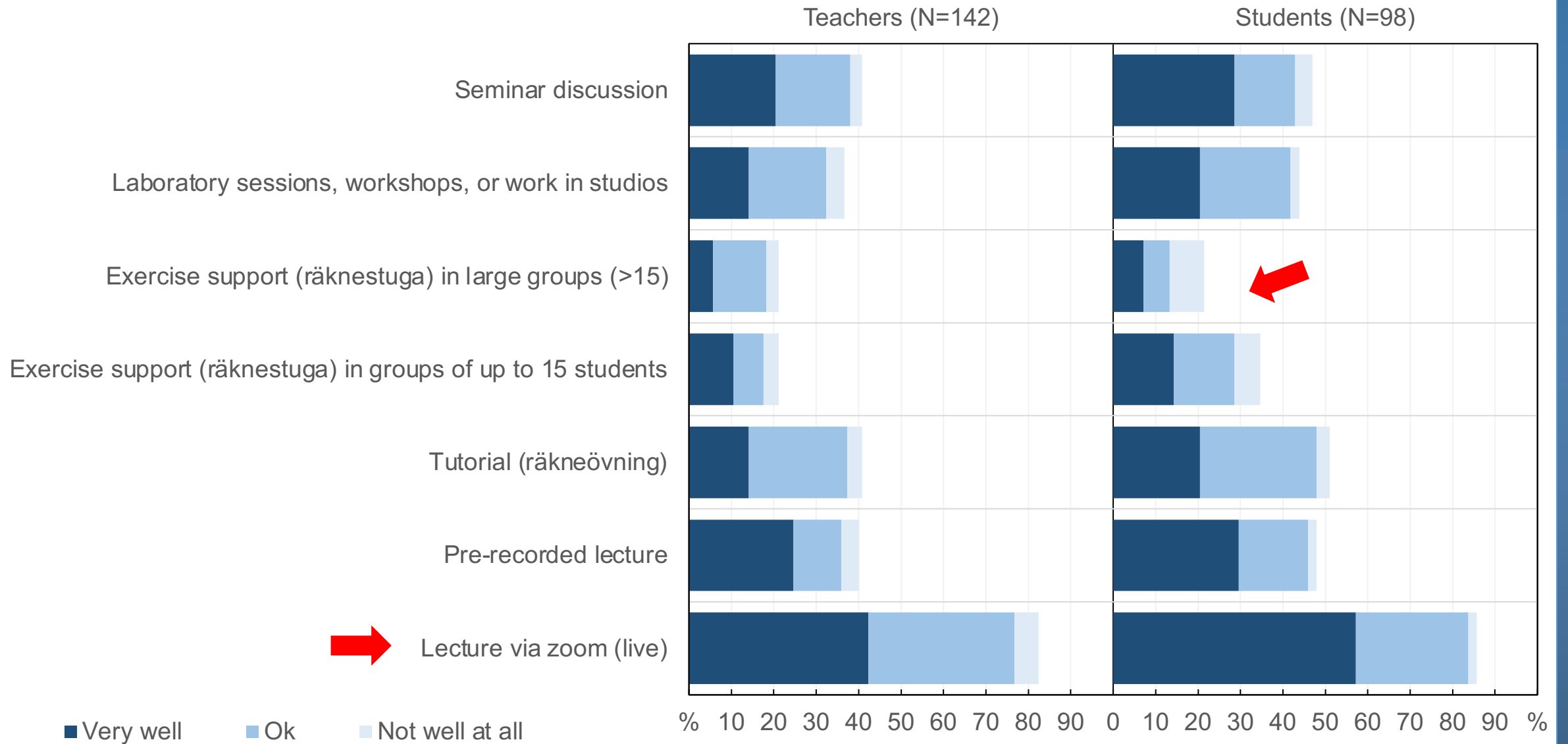
- professional development needs?

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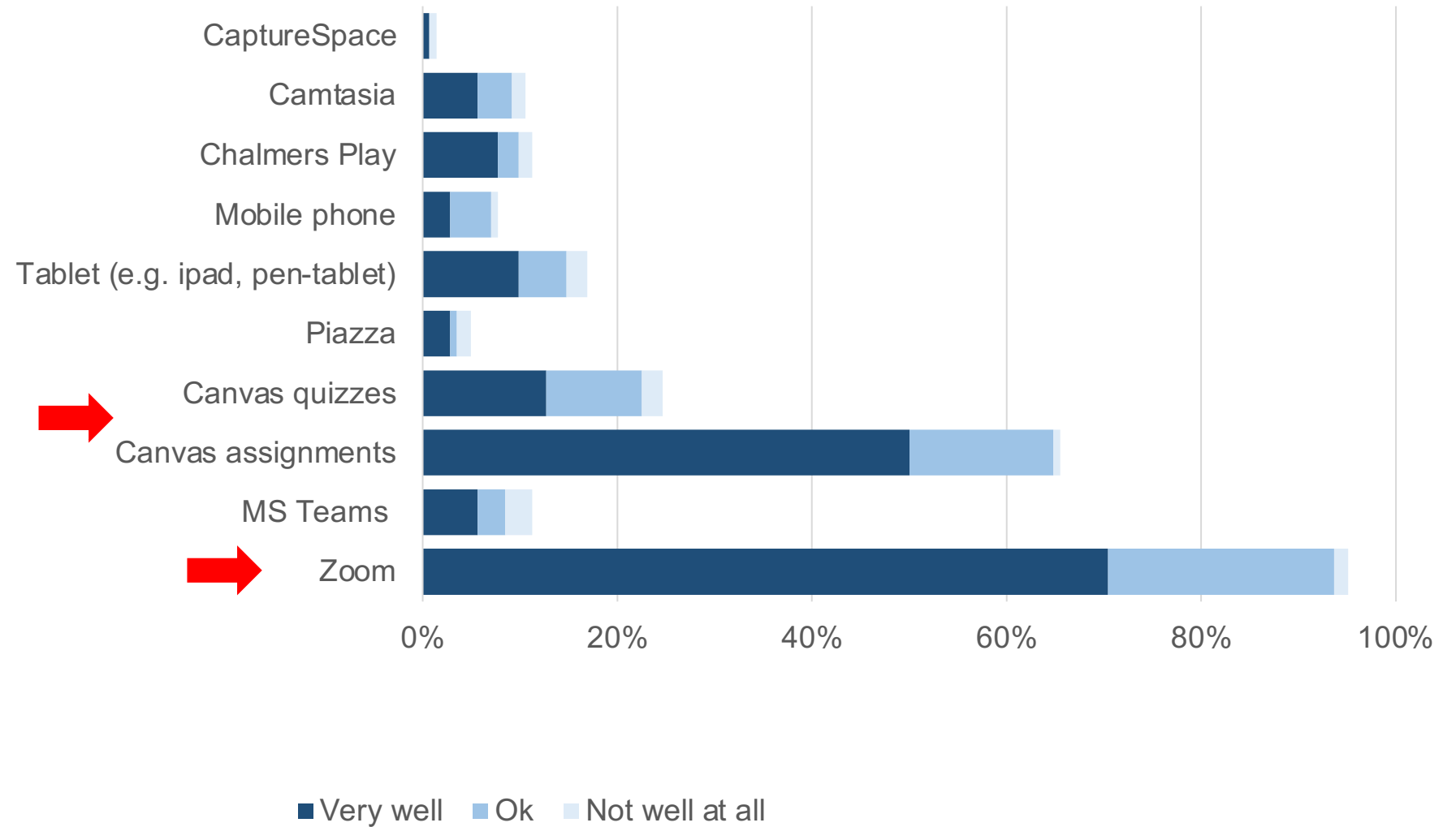
- Teachers' perspective

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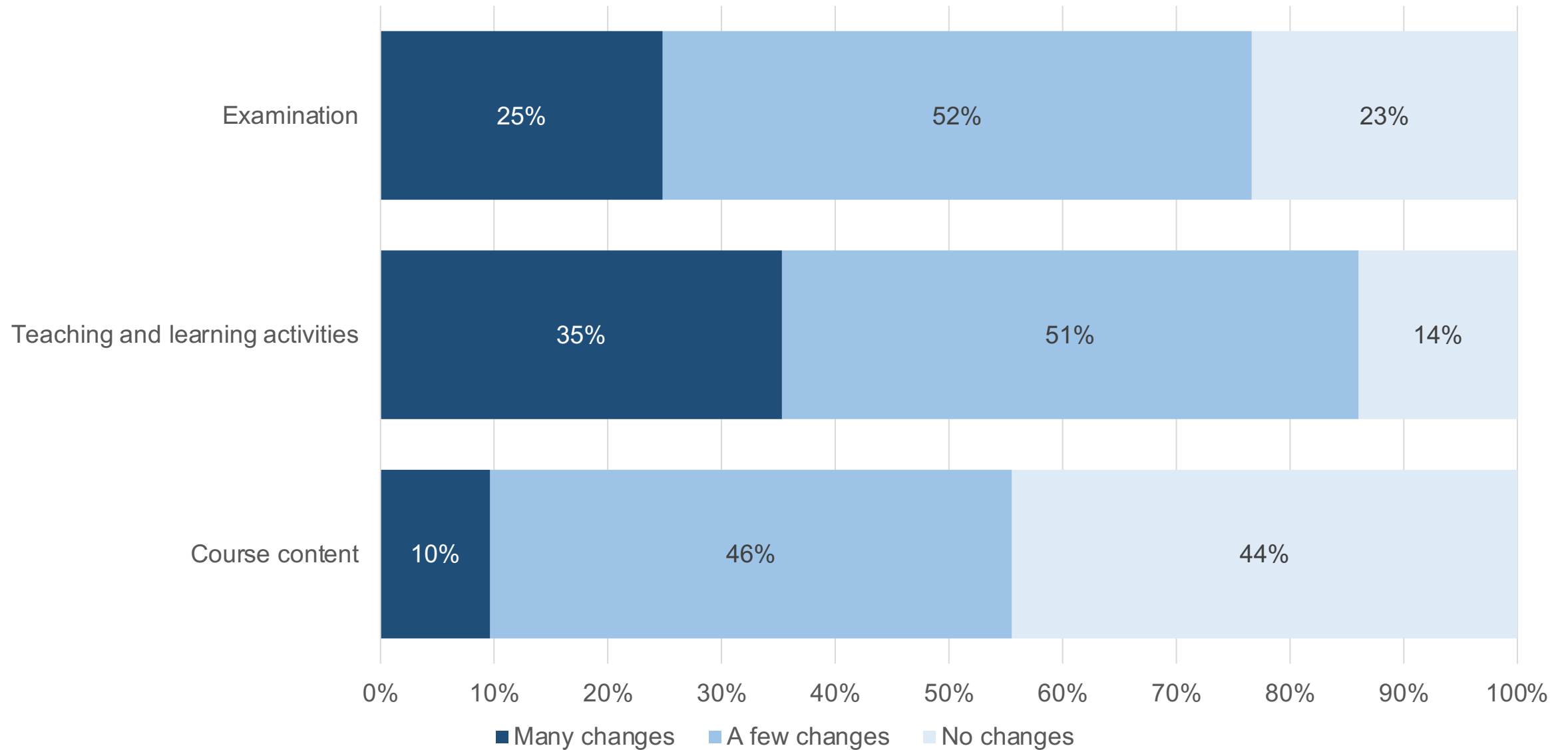
Which learning activities did teachers/students use and how well did they go?



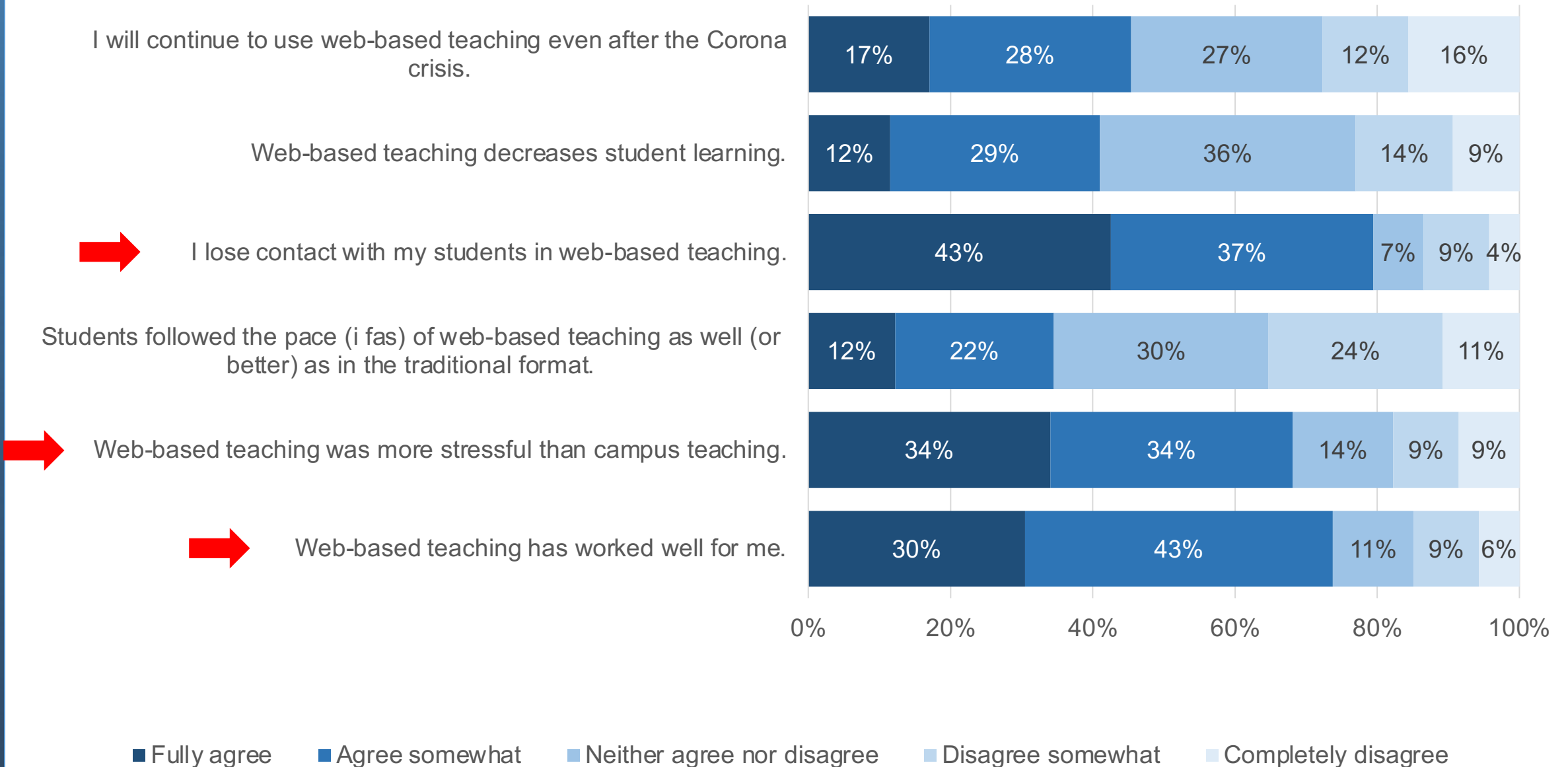
Which tools did teachers use and how well did they work?



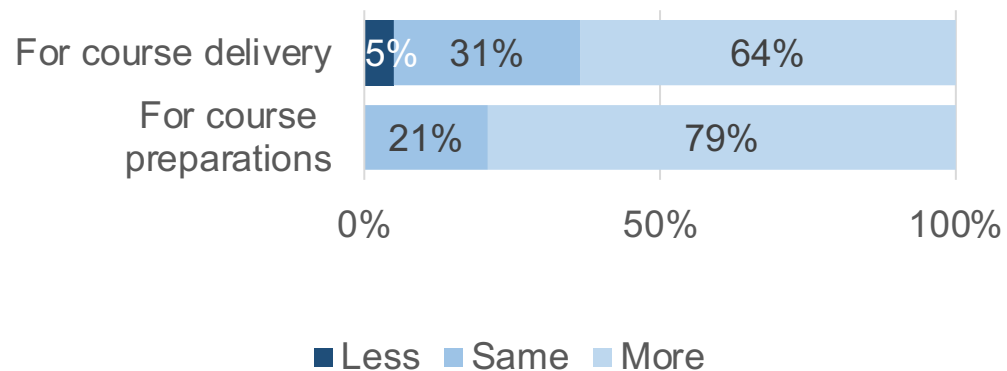
To what extent did teachers implement changes in your course(s) with regard to:



To what extent do teachers agree with the following statements:



How have teachers experienced the workload compared to a "regular" course?

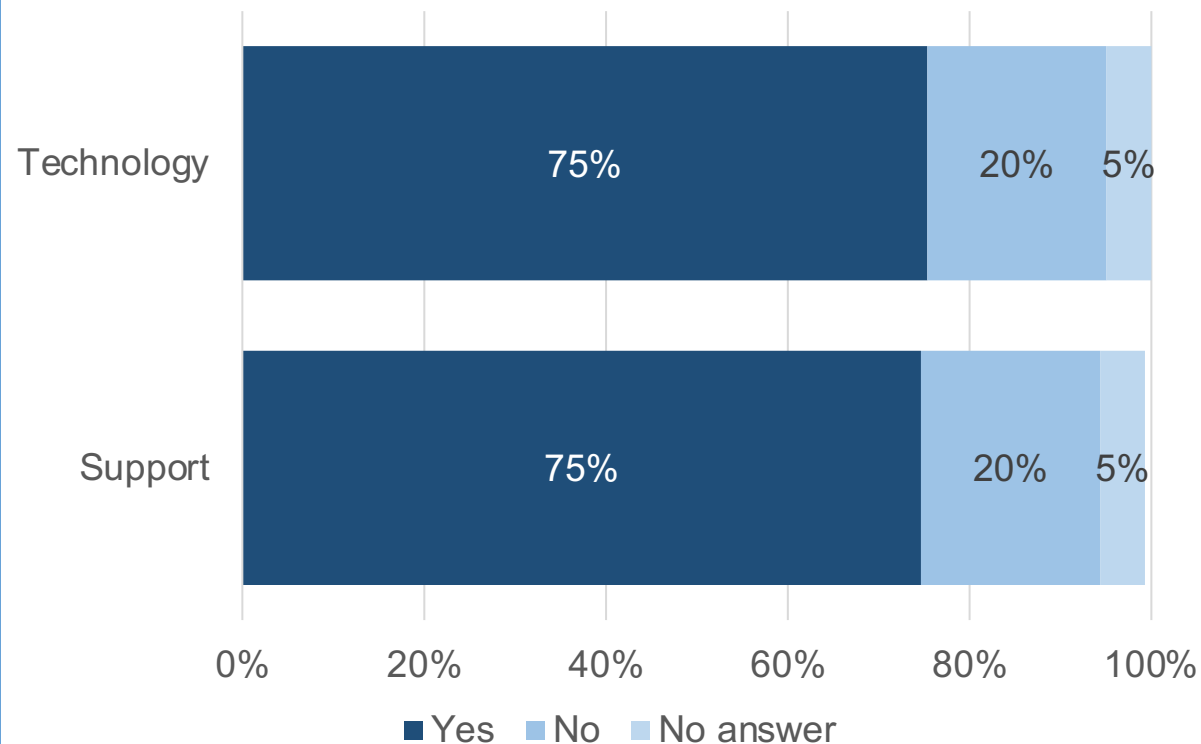


Mean additional hours (of those who answered *more*):

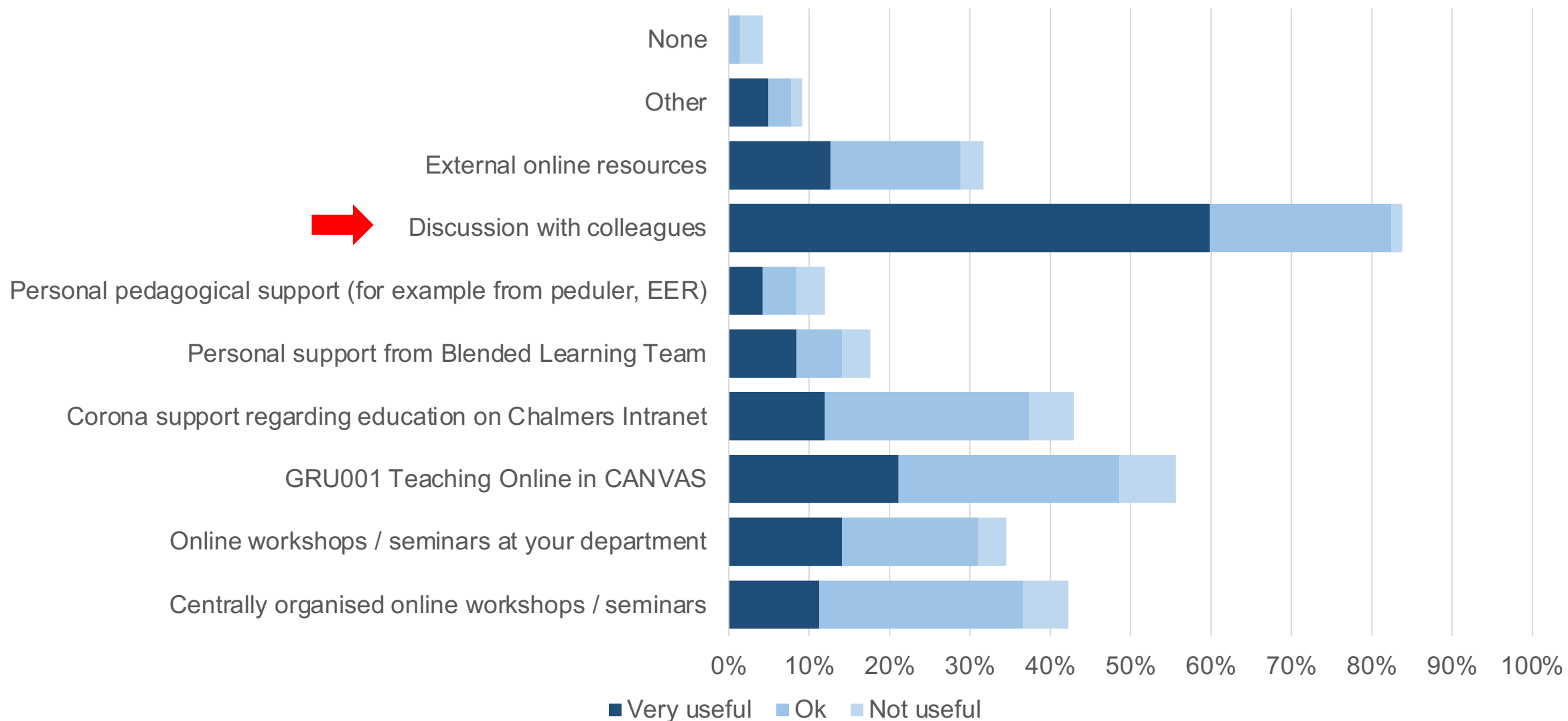
For course delivery: 42 h

For course preparation: 45 h

Was the technology and support provided by Chalmers sufficient to transition to web-based teaching?



What support did teachers consult during the transition to web-based teaching and how useful was that for you?



Teachers' perspective - observations

- Overall the transition to ERT worked relatively well
- Traditional learning design dominates:
 - Zoom lectures and Canvas assignments most usual
 - Changes to almost all courses, mainly learning activities and examination
- Main issues:
 - Time: more both for preparation and during the course (except for 5%)
 - Stress: more for 2 of 3 teachers
 - Student contact: lost by 4 of 5 teachers
- Post-Corona:
 - continuation for 1 of 2 teachers