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University teaching during the Covid-19 period

Reports from a longitudinal monitoring study

Perry den Brok, May 19, 2022

TU Delft Delft University of Technology

TU/e Technische Universiteit Eindhoven University of Technology

UNIVERSITY OF TWENTE.

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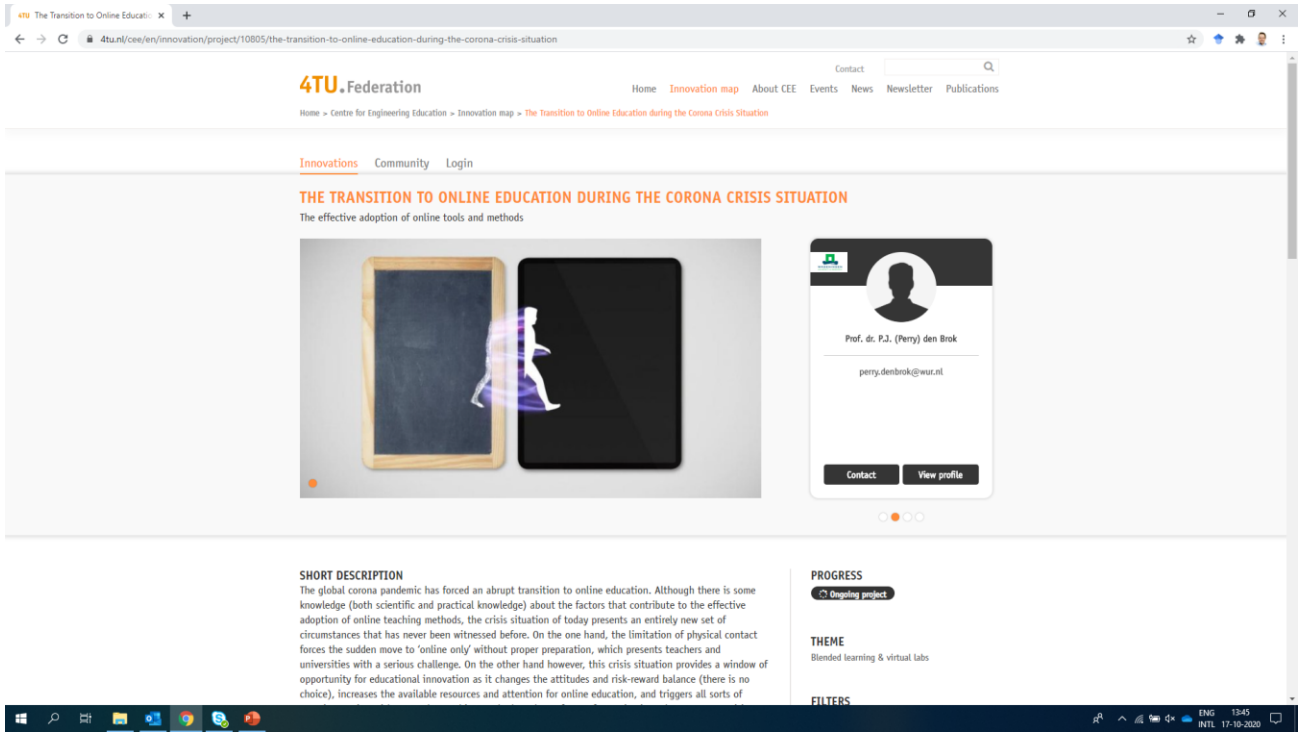

More info about this project:
https://www.4tu.nl/cee/en/innovation/project/10805/the-transition-to-online-education-during-the-corona-crisis-situation
Or:
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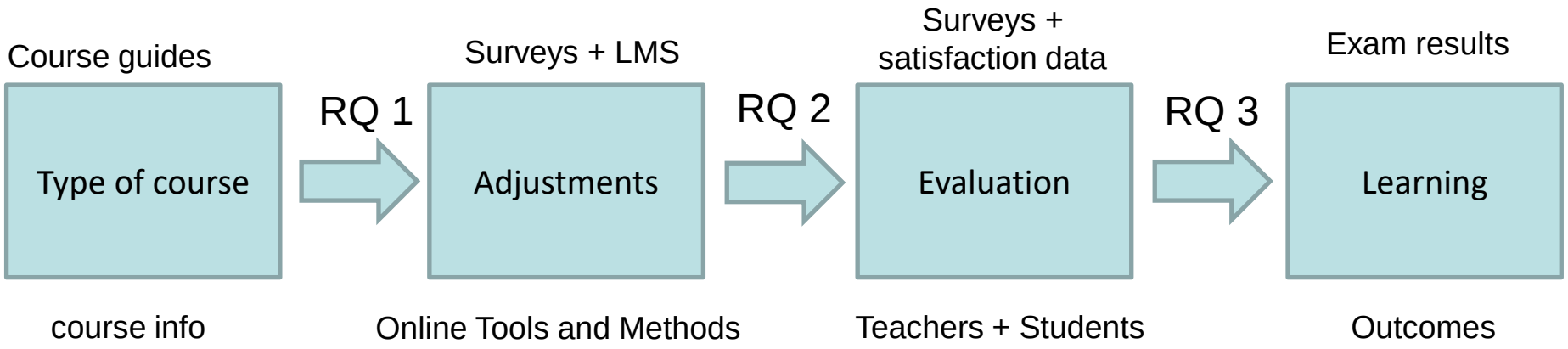
Contents of presentation

1. Methodology
2. Teacher and student well-being
3. Teacher and student beliefs vs actual trends
4. Developments in teacher practices
5. Teacher and student profiles
6. Lessons learned/recommendations

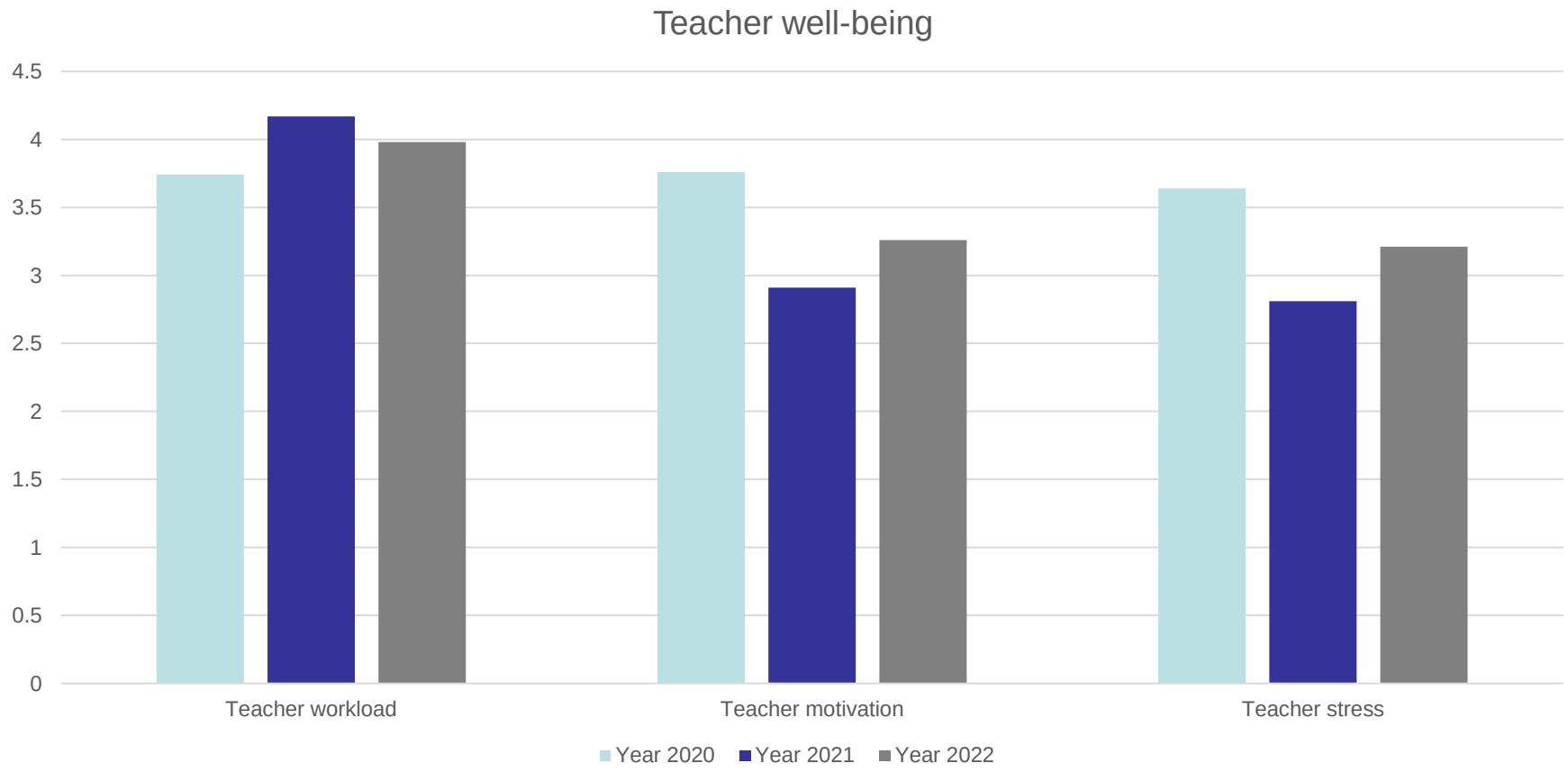
Methodology

- Student surveys in 3 education periods (N>1500 – 20% response)
- Teacher surveys in 3 periods (N>600 – 10% response)
- Online proctored examn survey (N=1136)
- Course satisfaction data (Ncourses=457, Nstudents=8997)
- Examn results (N=16828)
- Comparison with course satisfaction data and examn results previous years (2015 – 2021)
- Group interviews/workshops with teachers (N=3)
- Case studies (N=3)
- Course guide information (internet), interactive sessions with teachers, well-being data

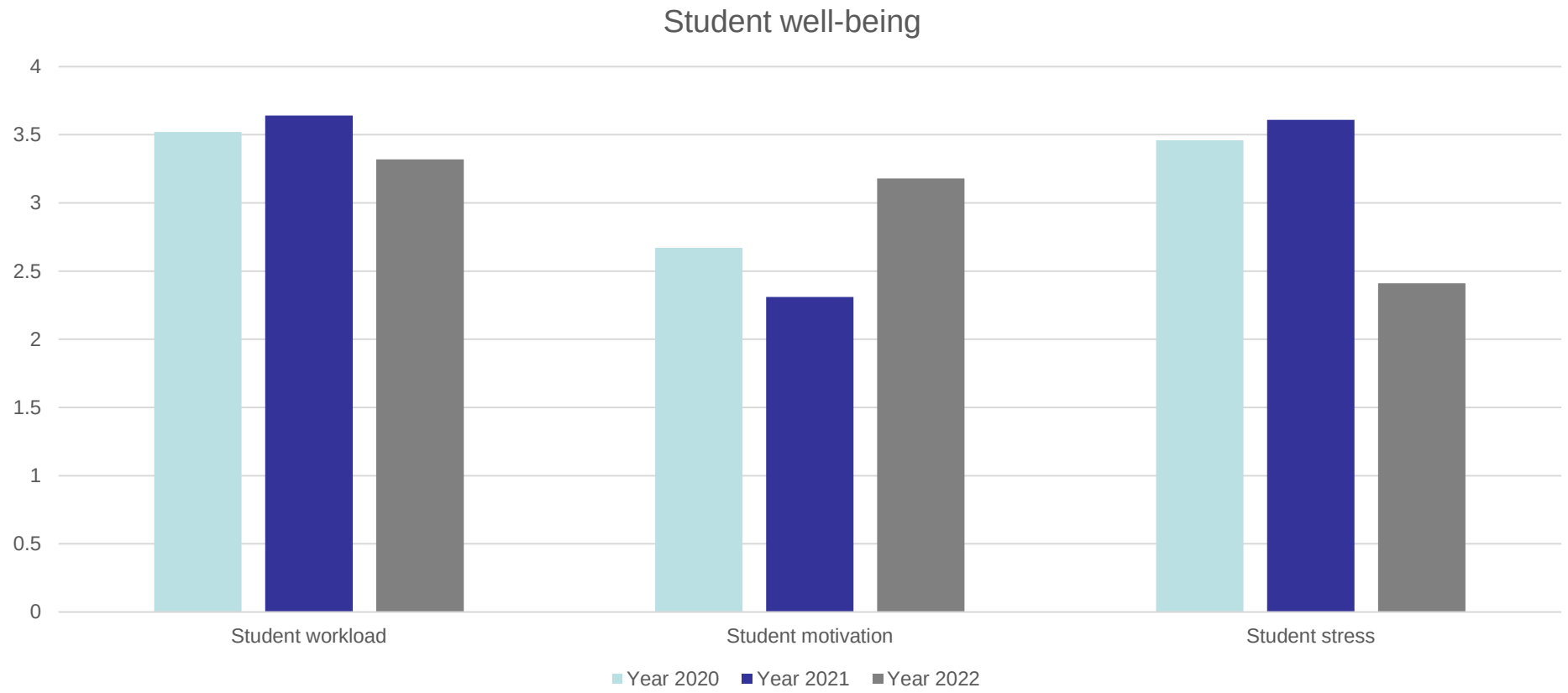
Conceptual/analytical framework



Teacher well-being



Student well-being



Support and skills

Teachers:

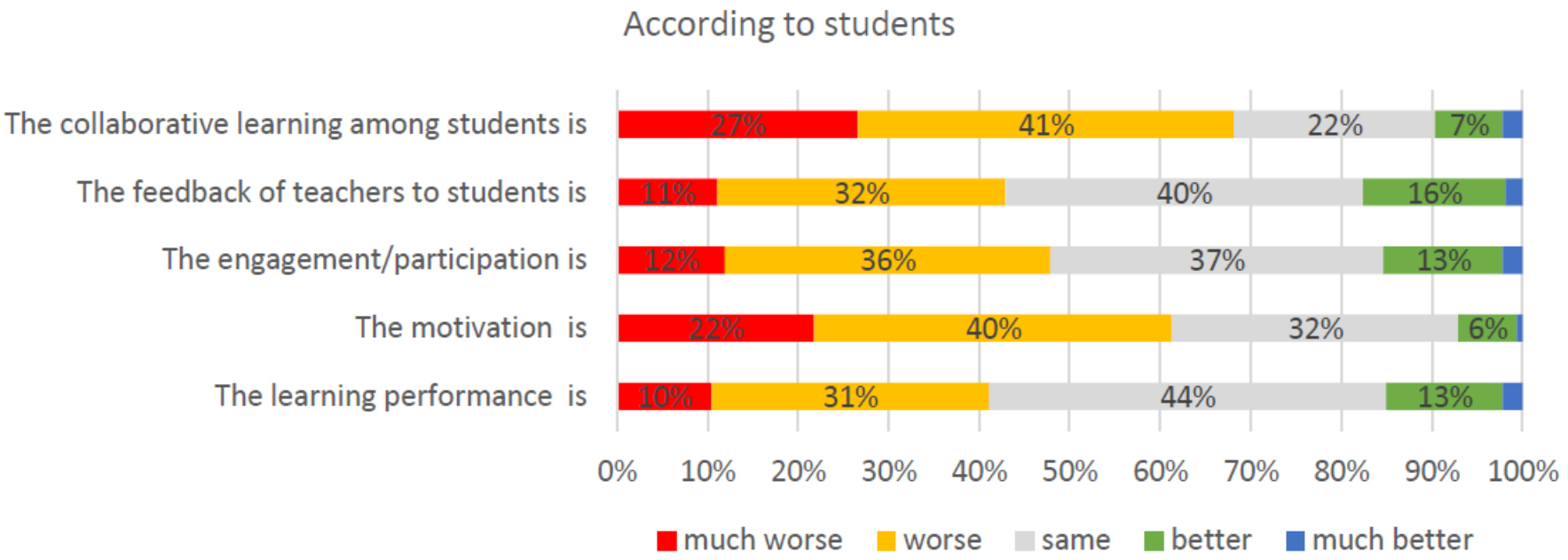
- On average, teachers are satisfied about education support, trainings and IT
- Teachers followed more trainings and webinars during Covid-19
- Teachers felt had the digital skills (83%) and didactic skills (59%) to teach online
- They felt they managed to teach their course online successfully (85%)

Students:

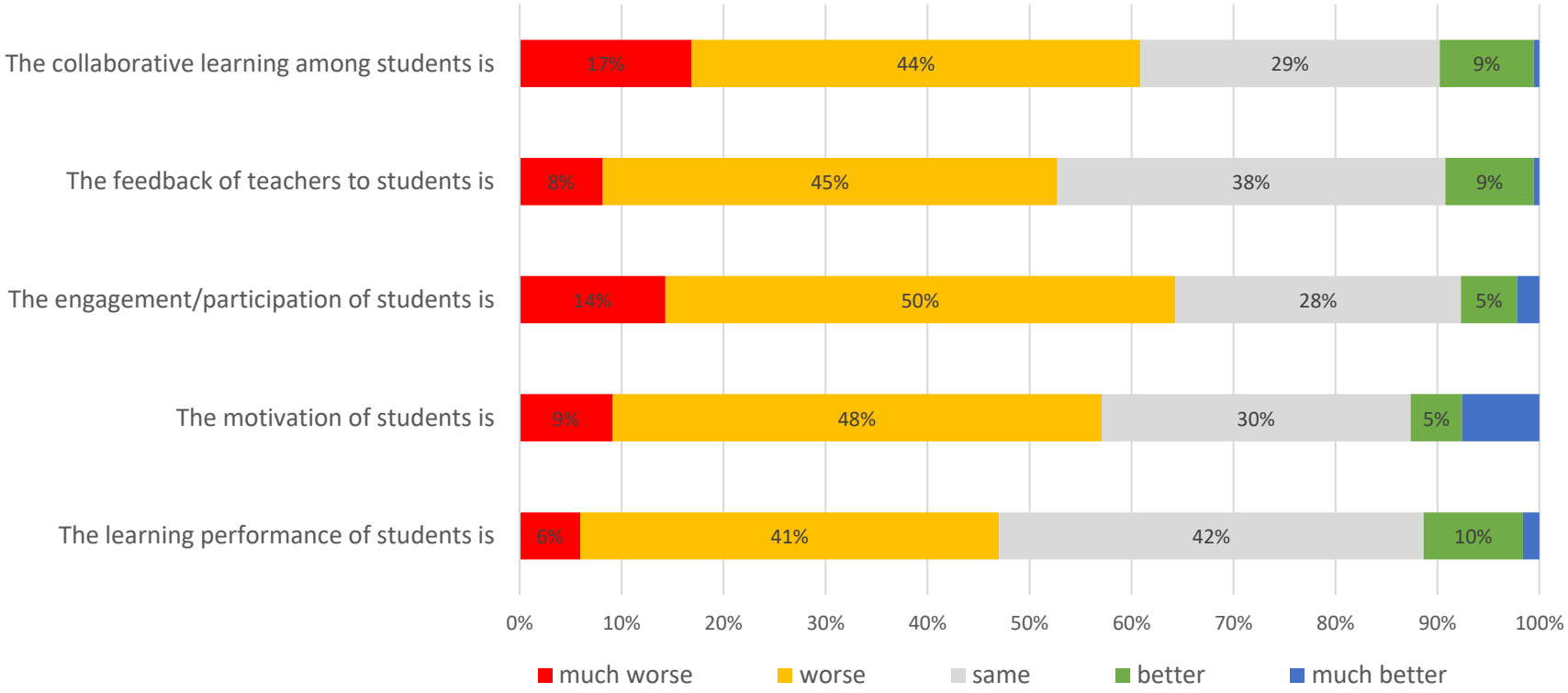
- Students felt supported by teachers and the university, were satisfied about the services (student support, IT, communication)
- Few students 'liked' online education, but were more positive about online than teachers
- Students were satisfied about quality of (online) education, felt capable to follow online education (73%)

Students' beliefs about outcomes of online education

Please indicate how you think the learning is affected by online teaching



Teachers' beliefs about outcomes of online education

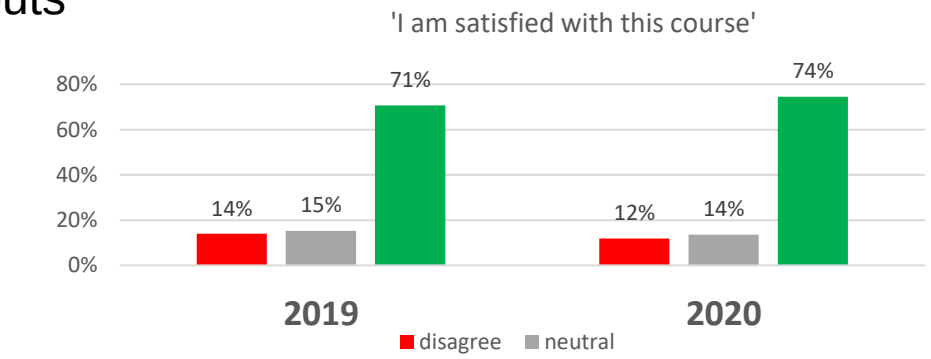


Grades and course evaluations

Year	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Grade	7.03	7.09	7.14	7.14	**7.33**
no grade %	21%	17%	19%	17%	**24%**

- Slightly higher grades, but also somewhat more drop outs

- No significant changes in students' course evaluation



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CHANGES IN TEACHING METHODS

Teaching methods were increasingly being revised rather than just maintained or fully replaced.

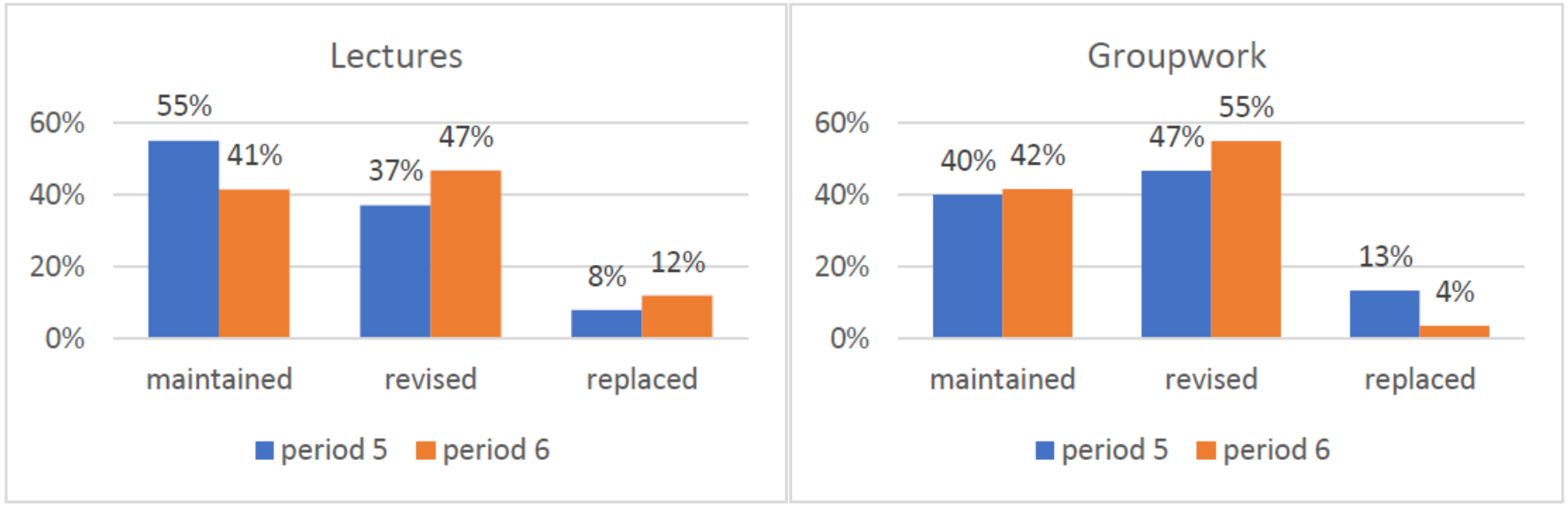

Figure 9. Changes in the type of adaptation (maintain, revise, replace) of teaching methods from period 5 to period 6.

<u>Lectures:</u>
from ‘maintained’ to ‘revised’.

<u>Group work, practical, excursions</u>:
from ‘replaced/cancelled’ to ‘revised’

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Teachers' opinions on teaching methods

Maintain: Lectures and interaction (13x)

Combination of online lectures/recordings, and new forms of interaction:

'I did like the idea of sharing pre-recorded lectures, but would like to use the time gained by this to organize proper, interactive question/answer sessions.'

'use virtual classroom for some lectures (elicits more interaction via chat screen and polls)'

'Let students watch online lectures and have feedback sessions afterwards'

Teachers' opinions on teaching methods

Discard: the 'virtual/asynchronous' interaction with students (20x)

Teachers report that they *miss or prefer* the **live lecturing** (9x)

'I personally dislike recorded lectures; just because I like to have interaction with students and see their faces live..'

'online lecturing, because I prefer real-life interaction and feedback '

Teachers report that they miss **feedback from students** (4x)

'I strongly prefer to teach live, to interact with the group and see the students. Now I have absolutely no idea who followed my course and how they perceived it'

'I miss the interaction with the students; I don't really know whether students dropped out.'

Teachers report that live interaction is **needed for learning objectives** of the course (11x)

'no online tool can replace lab work for learning skills'

'Students need practical experience. They haven't touched any plant this year'

'for the practicals, this did not meet the described learning goals'

'the students miss out on the 'soft interaction' with lecturers and peers, which is just as important as acquiring knowledge.'

CHANGES IN TEACHING METHODS - STUDENTS

What learning activity contributed most to your learning and why?

Live lectures (59) because:
- possible to ask questions (38)
- feeling of immediacy (13)
- increases engagement or focus (6)

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Recording (56) because;
- possible to rewatch, make notes (19)
- flexible planning (7)
- concentration (3)

Individual work (41) because;
- efficient learning (12)
- easy to concentrate (3)
- flexible (2)

⟺

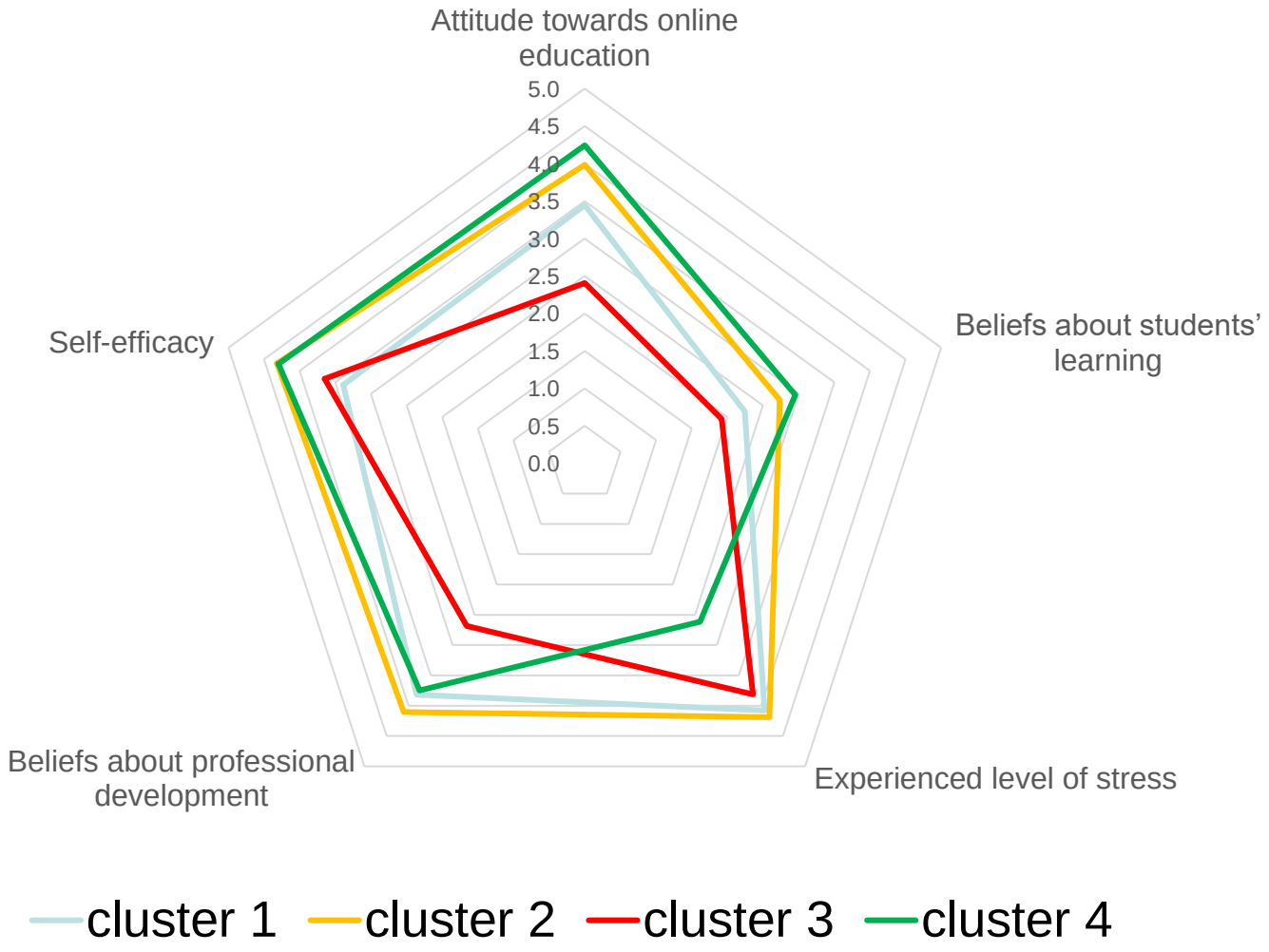
Group work (56) because:
- learn from discussion or sharing (13)
- motivated to work / peer pressure (9)
- engaging, enjoy personal contact (5)

Interaction with teacher (28), because;
- receive good feedback (21)

CHANGES IN TEACHING METHODS - CONCLUSIONS

- Many online tools and teaching methods were used for the first time.
- Most teachers intend to maintain some changes in teaching method (despite overall negative attitude towards online education).
- Teaching methods were increasingly being revised rather than just maintained or fully replaced.
- Students differed in their evaluation of different learning activities, e.g.:
  self-study <> group work
  recordings <> live lectures

TEACHER PROFILES



Profile 1: Critical but eager to learn (39%)

Negative about online education, support and themselves,
but use many services, and positive about their learning

Profile 2: Positive but stressed teachers (33%)

Positive about online education, support and themselves,
but experience the highest level of stress.

Profile 3: Reluctant teachers (20%)

Very negative about online education and support,
not much stress, low use of services, and do not learn from the experience.

Profile 4: Optimistic and easy-going teachers (8%)

Very positive about online education, support and themselves
low level of stress and low use of services (support, tools, trainings).

TEACHER PROFILES IN RELATION TO OTHER VARIABLES

Significant relation between the clusters (teacher profiles) and:

- behaviour (the use of tools, trainings and support)
- perceptions about support

Significant relation between the clusters (teacher profiles) and:

- gender
- teaching role (coordinator or lecturer)

No significant relation between clusters and age

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STUDENT PROFILES

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reliability measure; Cronbach Alpha >.6

STUDENT PROFILES

	**Profile 1: 22.1%** - Motivated and able to study online, - Neutral beliefs on learning outcomes, - Low/medium stress, - Likes individual learning - Positive about support from university/staff, not much on-campus
	**Profile 2: 29.3 %** - Not motivated and not feeling able to study online, - Negative beliefs about learning outcomes, - Highly stressed - Likes interactive learning - Neutral about support from university/staff, often on-campus
	**Profile 3: 48.8 %** - Neutral on motivation, feels somewhat able to study online, - slightly negative about learning outcomes, - quite stressed

STUDENT PROFILES IN RELATION TO OTHER VARIABLES

No differences between profiles in terms of:

- Experienced/preferred percentage of online education
- Gender
- Age
- Nationality
- First year or not
- Bachelor or master

Lessons learned

- There are huge differences between teachers (and students) – calls for differentiated approach
- Addressing beliefs about online/blended education is important – reality is often more positive than what teachers/students believe
- Trend from emergency replacement to conscious revising – calls for different support needs

Lessons learned (2)

- Some teaching methods were extra vulnerable: practicals, exams, excursions – no clear or widely available solutions
- Worry about continued increase in workload and stress of teachers – need for more predictable change and clear/stable policy?
- Need for monitoring innovation/change – helps to adapt while implementing change