

# WUR Education in Covid19 times



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Conducted at WUR



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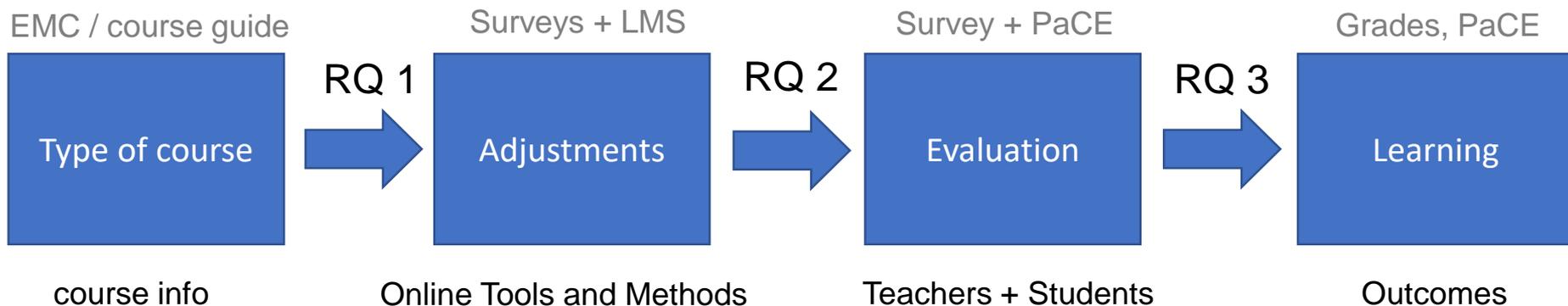
# Research Questions

How does the move to online education influence **course design** (teaching methods), **teachers** and the learning performance of **students**?

RQ1. What changes are made in teaching methods for different type of courses?

RQ2. How are the different type of teaching methods and adaptations (results RQ1) experienced and evaluated by students and teachers?

RQ3. How do the new teaching methods (1) and the attitude and behavior of teachers and students (2) influence the learning (process and outcomes) of students (3)?



# Data and Methods

Period of data collection: March – October 2020  
*period 5, period 6, and period 1 of the WUR calendar*

- Teacher survey, (N=521) (20% response)
- Student survey, (N=1251) (10% response)
- Students course evaluation PaCE
- Grades and success rates (2015 – present)
- Interactive sessions with teachers/students
- Students feedback on online proctored exams (N=1136)
- Interviews with teachers in period 5 (May, 2020)

# Key Results

1. Teachers' overall experiences
2. Students' overall experiences
3. Beliefs about students' learning
4. Grades and Course evaluations
5. Changes in Teaching methods
6. Teacher Profiles
7. Student Profiles

# 1. Teachers' experiences

## **Satisfied about Support:**

- On average, satisfied about education support, trainings and IT
- Teachers followed more trainings and webinars in period 6 and 1

## **Experience stress:**

- Teachers experienced stress (66%), difficulties working from home (51%) and an increased workload (80%).
- Workload: normally teachers spend 38.8% more time on teaching than arranged in their contract, in period 1 this was 43.8%.

## **Motivated:**

- Few teachers liked online teaching (29%), but most are motivated (74%)
- Had the digital skills (83%) and didactic skills (59%) to teach online
- They felt they managed to teach this course online successfully (85%)
- Trends: became more positive about online teaching and more able

Differences between teachers → [teacher profiles](#)

## 2. Students' experiences

### **Satisfied about support:**

- Students felt supported by teachers and the university
- Satisfied about the services (student support, IT, communication)

### **Low motivation, no increase in workload:**

- Not motivated (69%), and motivation decreased in p6 and p1
- Do not experience a significant increase in study load
- Well-being: physical and mental problems

### **Attitude and skills:**

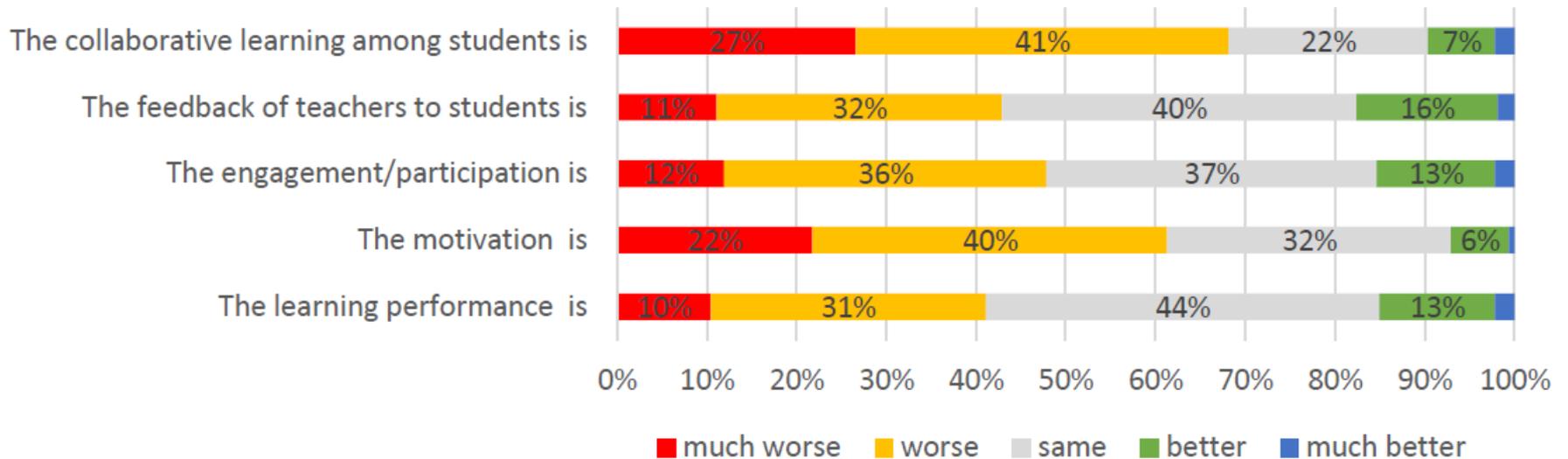
- Few students 'liked' online education, but more positive about online than teachers
- Satisfied about quality of education
- Students generally felt capable to follow online education (73%)

Differences between students > [student profiles](#)

# 3. Beliefs about online learning

Teachers and students both indicated that the learning process and performance is worse in online education

According to students



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

## 4. Grades and Course evaluations



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

- Slightly higher grades in p5 and p6, but also somewhat more drop outs
- No significant changes in students' course evaluation

# 5. Changes in Teaching Methods

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

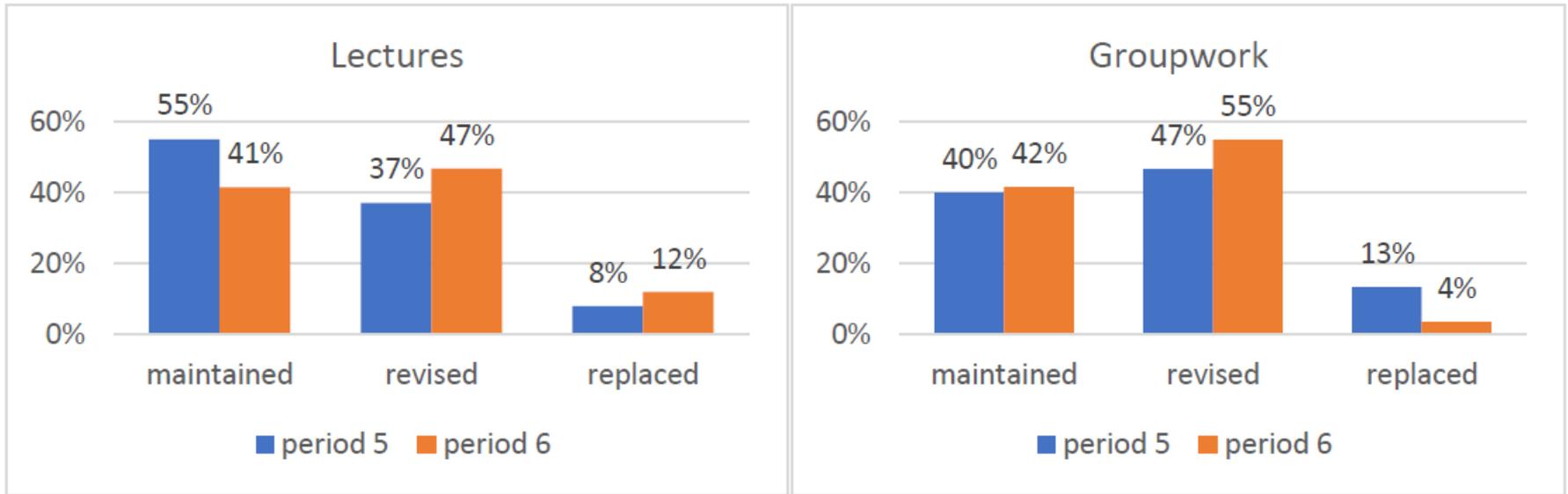
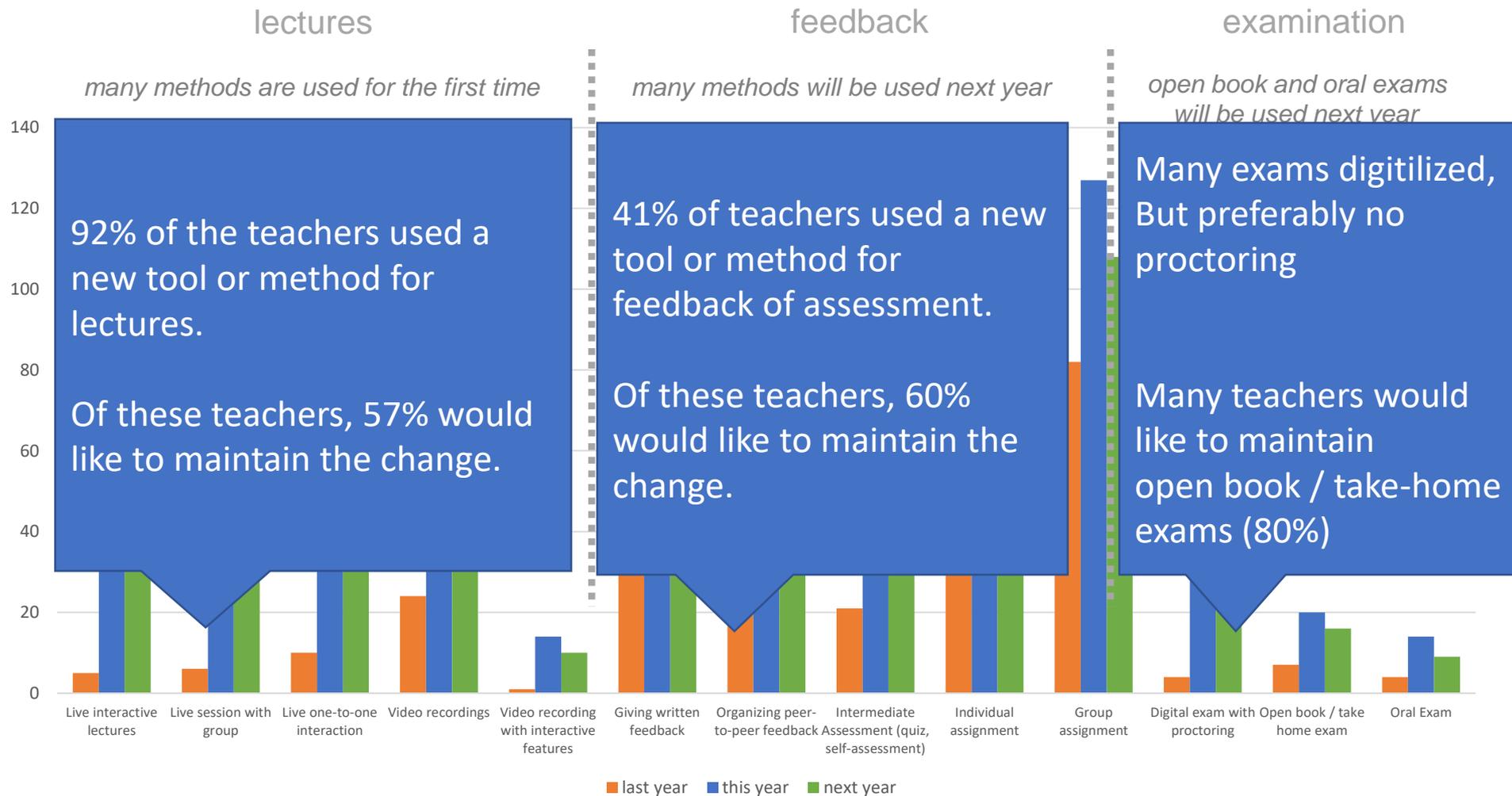


Figure 9. Changes in the type of adaptation (maintain, revise, replace) of teaching methods from period 5 to period 6.

Lectures:  
from 'maintained' to 'revised'.

Group work, practical, excursions:  
from 'replaced/cancelled' to 'revised'

# 5. Changes in Teaching Methods



# 5. Changes in Teaching Methods - Maintain

## Responses to open question

### 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'*

# 5. Changes in Teaching Methods - Maintain

## Responses to open question

### 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'*

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

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

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

# 5. 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)



## **Recording (56) because;**

- possible to rewatch, make notes (19)
- flexible planning (7)
- concentration (3)

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## **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)

# 5. 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

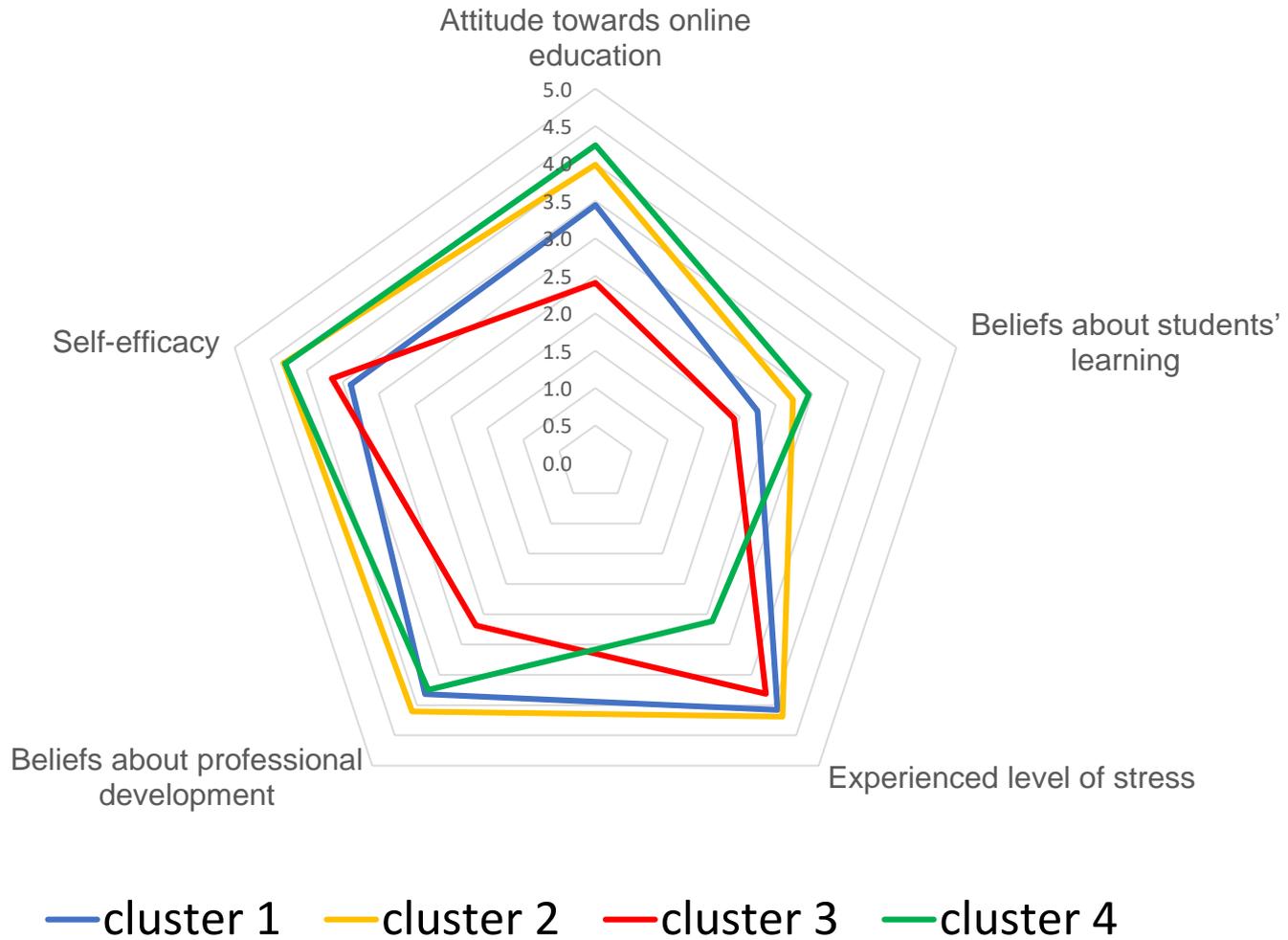
## 6. Teacher Profiles: Correlations and Constructs

Strong correlations among groups of variables → 5 constructs:

- Attitude towards online education
- Beliefs about online learning
- Stress
- Self-efficacy
- Beliefs about Professional Development

→ Hierarchical cluster analysis was conducted on these five variables

# 6. Teacher Profiles



## 6. 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

### 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).

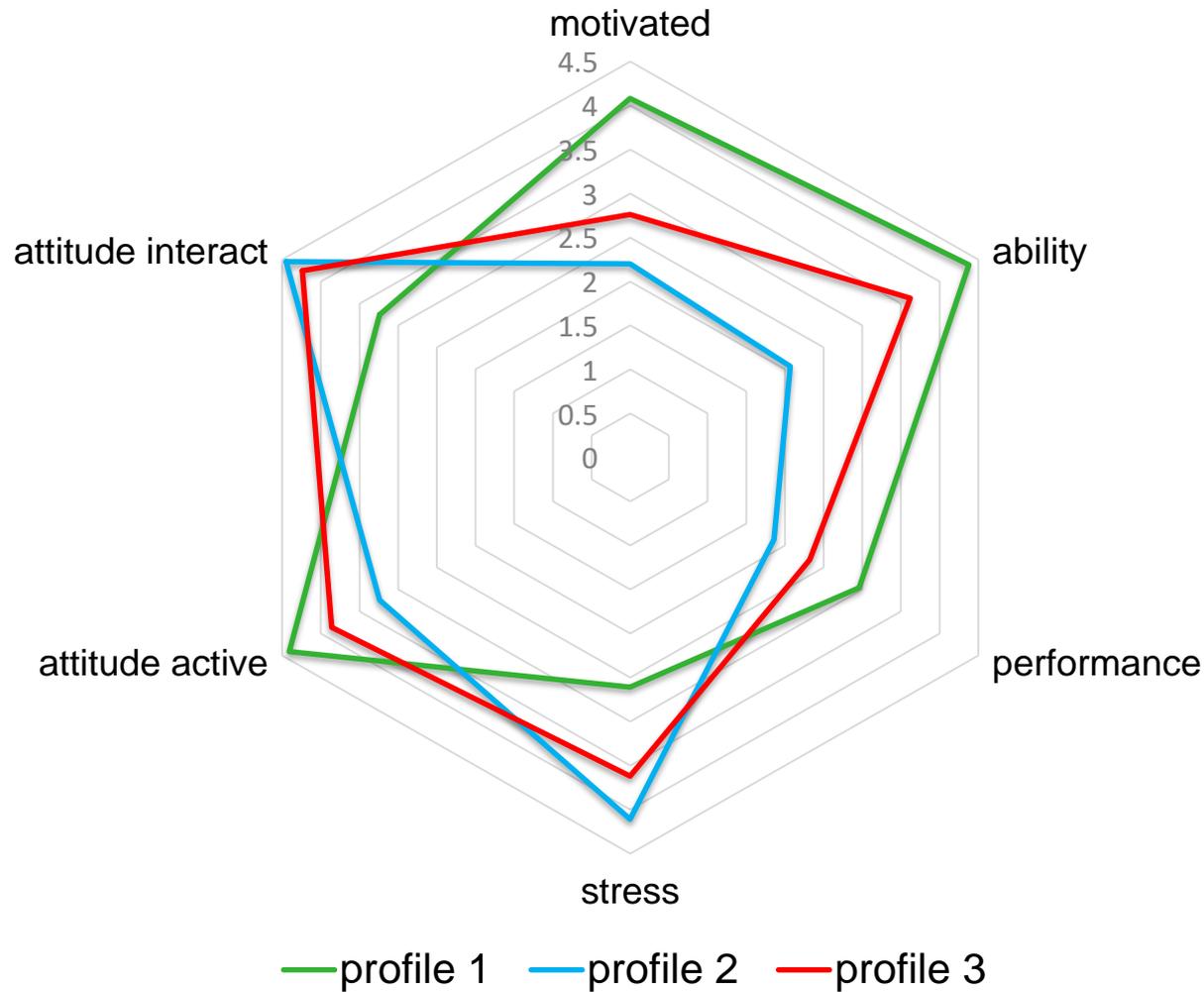
# 7. Student Profiles: Correlations and Constructs

Strong correlations among groups of variables → 5 constructs:

- Motivation
- Ability
- Performance belief
- Stress
- Attitude towards individual learning activities
- Attitude towards interactive learning activities

→ Hierarchical cluster analysis was conducted on these 6 variables

# 7. Student Profiles



# 7. Student Profiles

	<p><b>Profile 1: 22.1%</b></p> <ul style="list-style-type: none"><li>- Motivated and able to study online,</li><li>- Neutral beliefs on learning outcomes,</li><li>- Low/medium stress,</li><li>- Likes individual learning</li><li>- Positive about support from university/staff, not much on-campus</li></ul>
	<p><b>Profile 2: 29.3 %</b></p> <ul style="list-style-type: none"><li>- Not motivated and not feeling able to study online,</li><li>- Negative beliefs about learning outcomes,</li><li>- Highly stressed</li><li>- Likes interactive learning</li><li>- Neutral about support from university/staff, often on-campus</li></ul>
	<p><b>Profile 3: 48.8 %</b></p> <ul style="list-style-type: none"><li>- Neutral on motivation, feels somewhat able to study online,</li><li>- slightly negative about learning outcomes,</li><li>- quite stressed</li></ul>

# 7. 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

# Conclusions

- Teachers: **increase in work pressure, but still motivated**
- Students: **low motivation and well-being**
  
- Teachers and students believe the **learning performance** was worse
- The **grades** were not lower, but slightly higher
- **Course satisfaction (PaCE) was stable**
  
- Teaching methods were **increasingly revised** (rather than maintained / replaced)
- The majority of teachers want to **maintain** some adjustment in teaching method
- **Teacher profiles** to develop targeted teachers support, communication, policy
- **Student profiles** to offer diverse learning activities, student support, etc.

# Questions?

Please do not hesitate to contact us!

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