Shifting educators and learners into remote instruction during the COVID-19 pandemic

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The study

When: April until September 2020

Where: global (**over 9,000 participants** from **118 countries**)

Who: language teachers, linguistics instructors, educators and learners

What: longitudinal study looking at **factors** that potentially influenced participants' health, wellbeing, and effectiveness in teaching and learning during school closures. In particular, we aimed to understand what **circumstances, behaviours, attitudes and psychological traits** facilitated the shift, and what caused difficulty.
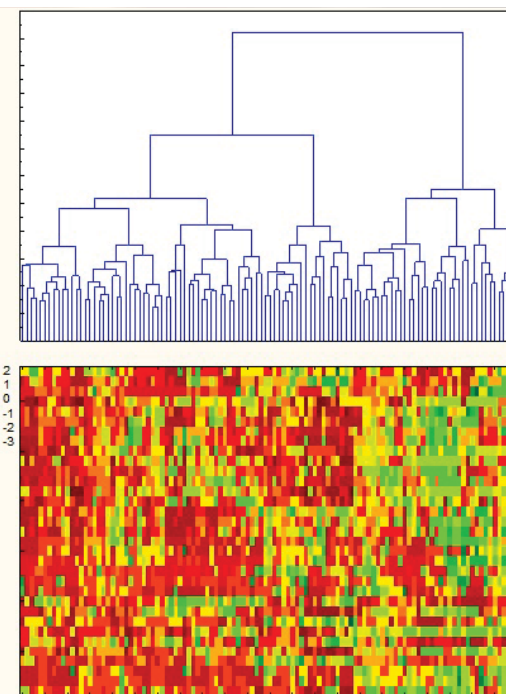

Participants
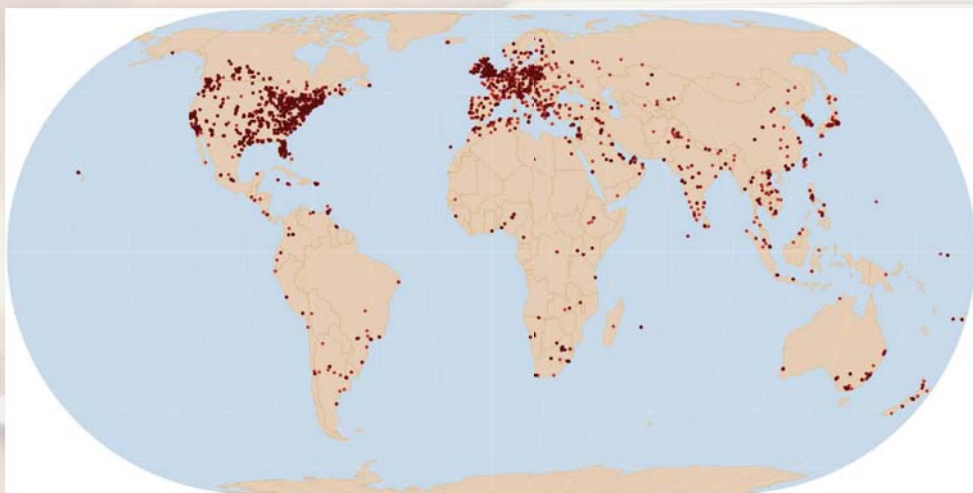
Main countries represented: USA, Canada, Australia, India, China, Japan, South Korea, Thailand, Trinidad & Tobago, Spain, UK, Ireland, France, Greece, Germany, Italy, Poland

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Language **learners**

Slide 1

The better- and worse-coping clusters were distinguished by:

- motivation: both general, and staying motivated in class
- engagement in the learning process
- difficulties with staying focused
- concern regarding the assessment of in-class activity
- the teachers' (in)ability to meet individual/special needs
- initial confidence in the ability to learn remotely
- general attitudes towards distance teaching
- interaction with the teacher and classmates
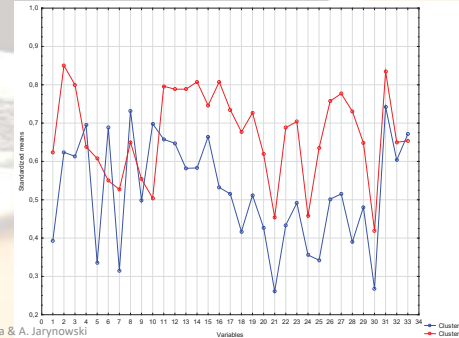
Slide 2

Slide 3
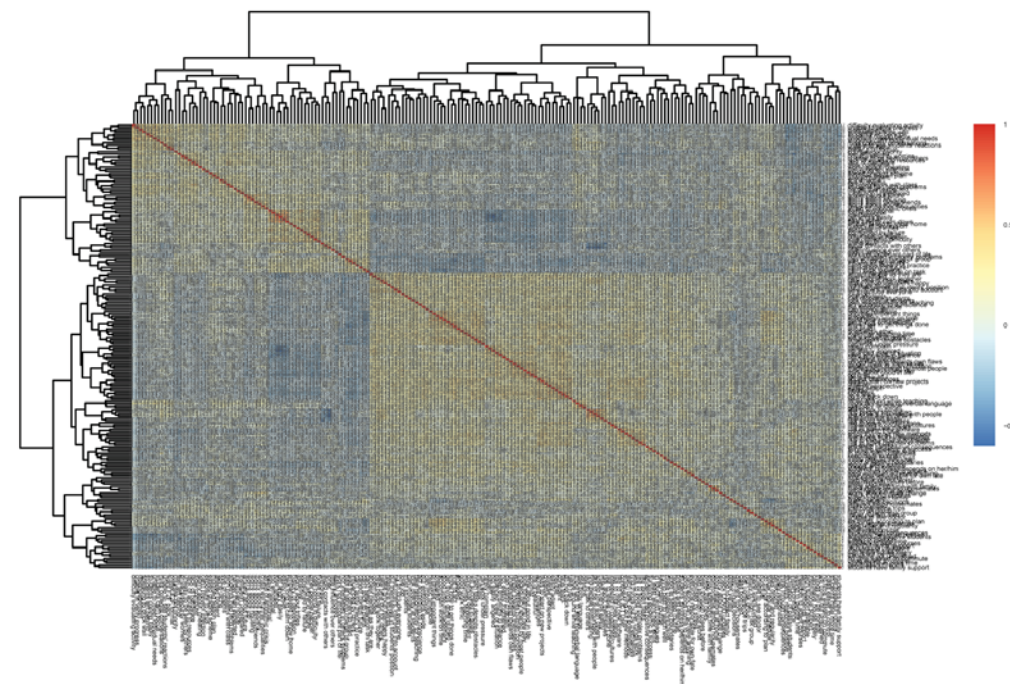
Network visualisation

- 204 Likert-scale items
- nodes – question items
- links – correlation values above .3 threshold (abs)
- community detection: Louvain method on a weighted network
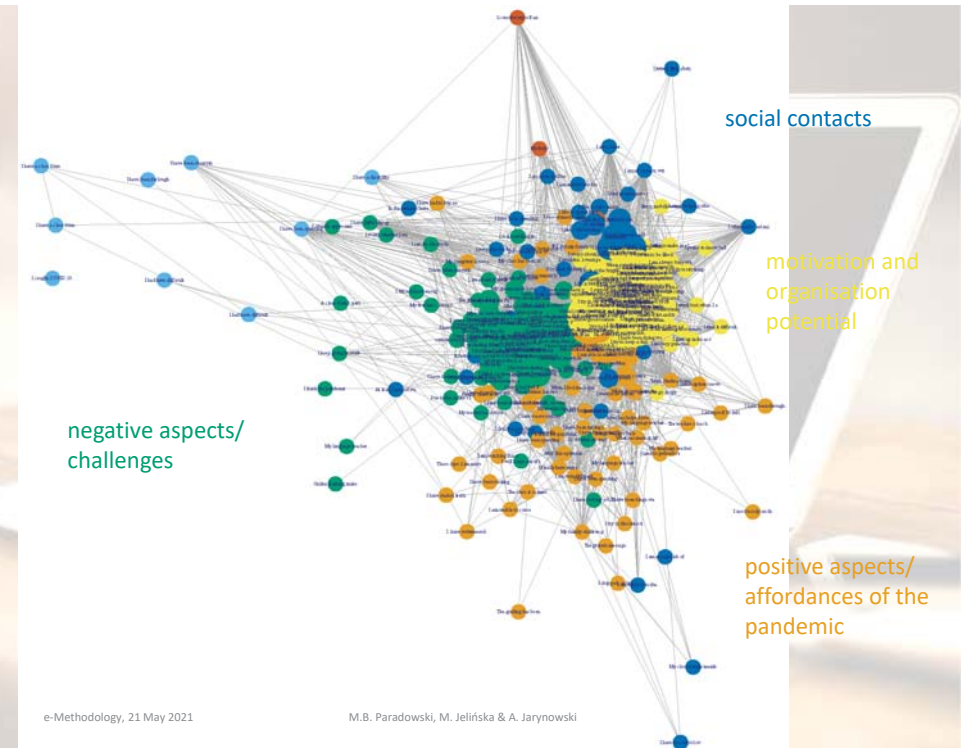
Slide 4

social contacts

motivation and organisation potential

negative aspects/ challenges

positive aspects/ affordances of the pandemic

Take-aways

Very high concentration of centralities

Hubs – psychological constructs and a couple other key variables:
- love of learning
- organisation
- competence
- ambition, perseverance and willpower
- optimism
- creativity
- curiosity
- perceived stress level
- flexibility

How about language **teachers?**

- gender distribution:
  - 82.1% female
  - 16.6% male
  - 1.2% non-binary/not listed
- age span 22 to 74 (mean/median 44)
- teaching experience 0 to 49 years (mean 13.7, median 12 years)
- 24% NOT teaching in their home country

  AND
- 22% were teaching students residing in different time zones

Participants

	Frequency (*n*)	Percent (%)
Education level taught		
K–primary	568	29.2
secondary	472	24.3
tertiary	772	39.7
other	27	4.2
not reported	51	2.6
Gender		
female	1,610	82.8
male	320	16.5
not listed/non-binary	14	0.7
Trained in remote teaching before the pandemic		
no	1646	84.7
yes	298	15.3
Appraisal of relative situational impact		
students affected more than teachers	644	33.1
teachers and students affected equally	28	53.2
teachers affected more than students	113	5.8
not reported	153	7.9

## Types of school represented
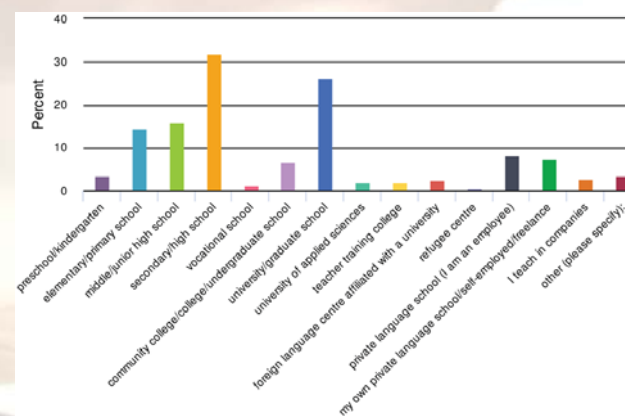
whereof:
61% state schools
34% private schools
4% religious schools
2% run by an NGO/foundation

Language levels taught

On average, the teachers found that the remote instructional mode depressed students' language progress by around **64**.29% (!; SD = 31.38, with a handful of students actually reported to regress).

Future learning outcomes are the biggest cause for concern in beginner-level classes.

48.3% 47% 53.8% 46.5% 31.4% 12.4%
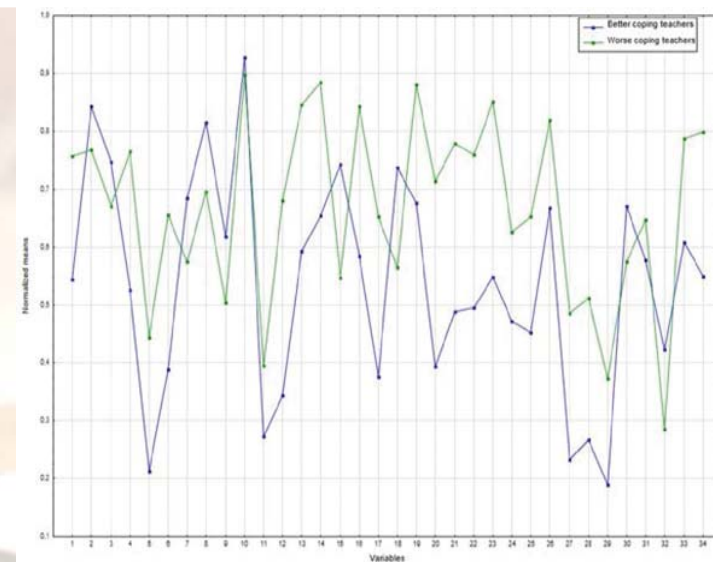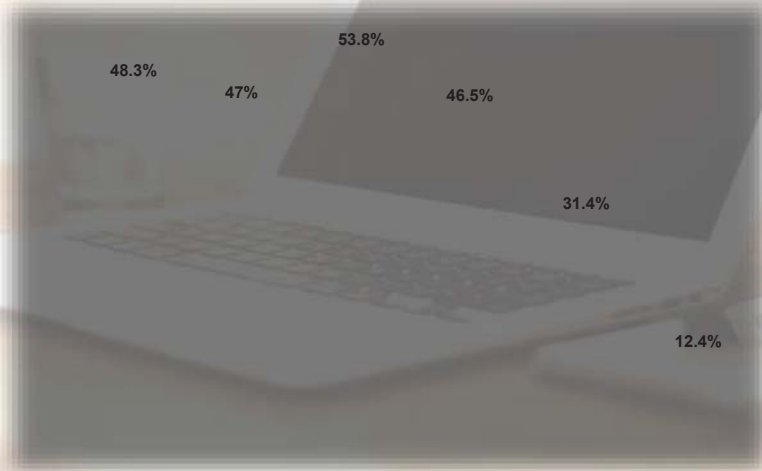
Normalized mean values for variables measuring the following meaningful aspects of the shift to remote teaching: **preparedness level and support received, effectiveness and engagement in using new technologies, perception of students' coping, logistic problems, and general positive orientation**

What distinguishes better-coping teachers?

- More than half (54.1%) taught at **higher levels of education**: community colleges/colleges/undergraduate schools, universities/graduate schools, universities of applied science, or as private tuition
- As many as 90% of teachers in this cluster declared they were teaching remotely **in real time** (i.e., synchronous classes)
- A majority (54.4%) found online teaching **equally efficient** to traditional face-to-face classes. When comparing their current work with the period before the COVID-19 pandemic, most (61.7%) estimated themselves to be equally productive.
- Compared with the worse-coping teachers, not only did they feel **better prepared** for and **supported** in remote teaching, they were also more **satisfied with using online platforms and software**. They perceived their **students** as **coping well** enough with remote learning and experienced **fewer logistic problems**. This group of teachers maintained **positive overall life and work attitudes** and 70.1% declared to cope better in these circumstances than others.

What distinguishes worse-coping teachers?

- A majority (82.4%) taught in **elementary/primary schools, middle/junior high schools, secondary/high schools** (the best represented here, 35.8% of the teachers) and teacher training colleges.
- In this group, only 36.8% of the teachers taught classes remotely in real time
- 84.9% estimated online teaching to be **less efficient** than regular face-to-face classes (only 5.7% found online teaching as efficient as traditional in-class teaching). 39.8% found their current work productivity similar to the one they had before the pandemic, while almost the same number (39%) felt **less productive** than before the COVID-19 lockdown.
- this group of teachers scored lower in all the measured aspects meaningful in the transition to remote teaching. 55.6% found that they coped as well as others in the pandemic context of living and working (vis-à-vis 70.1% of the teachers from the better-coping cluster).

Teacher engagement

Multivariate Linear Regressions Built with ANCOVA (Forward Selection) for Variables Predicting Teachers' Engagement

	step	b	β	SE	t	95%CI	
intercept		2.14		0.12	18.55	1.91	2.37
coping	1	0.24*	0.32	0.02	13.76	0.21	0.27
course mode: synchronous	2	0.12*	0.17	0.02	6.88	0.16	0.09
education type / level:	3						
K–5		−0.09*	−0.07	0.03	−2.68	−0.16	−0.02
middle school		−0.24*	−0.15	0.04	−5.75	−0.32	−0.16
high school		−0.08*	−0.07	0.03	−2.70	−0.14	−0.02
higher education		0.15*	0.11	0.03	4.34	0.08	0.21
country classification: developed	4	−0.07*	−0.06	0.03	−2.61	−0.13	−0.02
prior remote teaching experience: no	5	−0.06*	−0.06	0.02	−2.73	−0.11	−0.02
gender: female	6	−0.13*	−0.06	0.09	−1.41	−0.30	0.05
age	—						
years of professional experience	—						

*p < .001

Disparities among teachers influencing their psychological overload

Independent variables	b	SE	β	t	R^2	F	η_p^2	95%CI
Future anxiety	.39	.02	.35*	18.09	.16	327.17	.15	.13 .18
Situational coping	−.53	.04	−.27*	−14.13	.11	199.64	.10	.08 .12
Perception of student coping	−.18	.03	−.14*	−6.50	.30	42.27	.02	.01 .04
Age	−.02	.00	−.14*	−7.95	.03	63.24	.03	.02 .05
Access to resources	.08	.02	.09*	4.23	.24	17.93	.01	.003 .02
Appraisal of the situational impact						11.12	.02	.008 .03
teachers more affected than students	−.13	.06	−.04*	−2.15	.16			
students more affected than teachers	−.17	.04	−.08*	−3.99	.22			
teachers and students affected equally	.06	.04	.03	1.62	.15			

Disparities among teachers influencing their psychological overload

Independent variables	b	SE	β	t	R^2	F	η_p^2	95%CI
Education level handled						5.95	.01	.003 .02
primary	.13	.04	.06*	3.09	.12			
secondary	.06	.04	.03	1.51	.06			
tertiary	−.09	.04	−.04*	−2.22	.11			
Family support	−.01	.02	−.06*	−3.47	.04	12.01	.01	.002 .01
Gender						5.04	.01	.00 .01
female	.01	.09	.00	.15	.68			
male	−.17	.10	−.05	−1.75	.67			
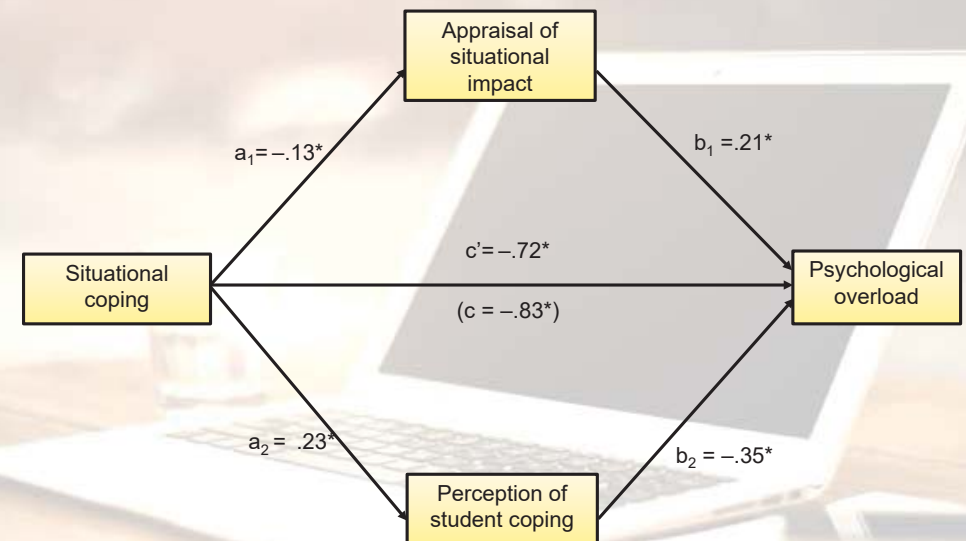
The mediating effects of the appraisal of situational impact, perception of student coping and access to resources in the relationship between situational coping and psychological overload.

Slide 1

Mediation diagram:
- Future anxiety → Perception of student coping: a = −.25*
- Perception of student coping → Psychological overload: b = −.28*
- Future anxiety → Psychological overload: c' = .47*
- (c = .54*)
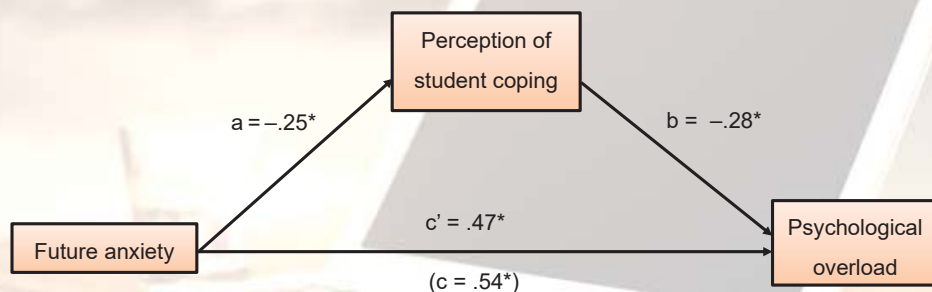
The mediating effect of access to resources and perception of student coping in the relationship between anxiety about the future and psychological overload.

Slide 2

Factors influencing perception of student coping

Table 3. Pearson's $r^{[1]}$ and Spearman's $\rho^{[2]}$ correlation coefficients between indicators of teachers' professional adaptation to ERT and perceived student coping with online learning

	Perceived student coping	R^2	95%CI	
Evaluation uncertainty[1]	−.57*	.33	.29	.36
Instructional adjustment[1]	−.45*	.20	.16	.24
Perceived remote teaching effectiveness[2]	.44*	.17	.13	.21
Education level handled[2]	.32*	.10	.06	.14
Activity evaluation[1]	.30*	.09	.05	.13
Initial confidence in ability to teach remotely[1]	.29*	.03	−.01	.07
Overly demanding expectations[1]	.21*	.05	.01	.09
Supportive teaching[1]	.14*	.02	−.02	.06
Reassuring attitude[1]	−.12*	.02	−.02	.06
Sense of competence[1]	.10*	.01	−.03	.05
Appraisal of relative situational impact	.03	.00	−.04	.04

Slide 3

Concerns about learning outcomes

Table 6. General linear model with ANCOVA for variables predicting language teachers' concerns about future teaching outcomes

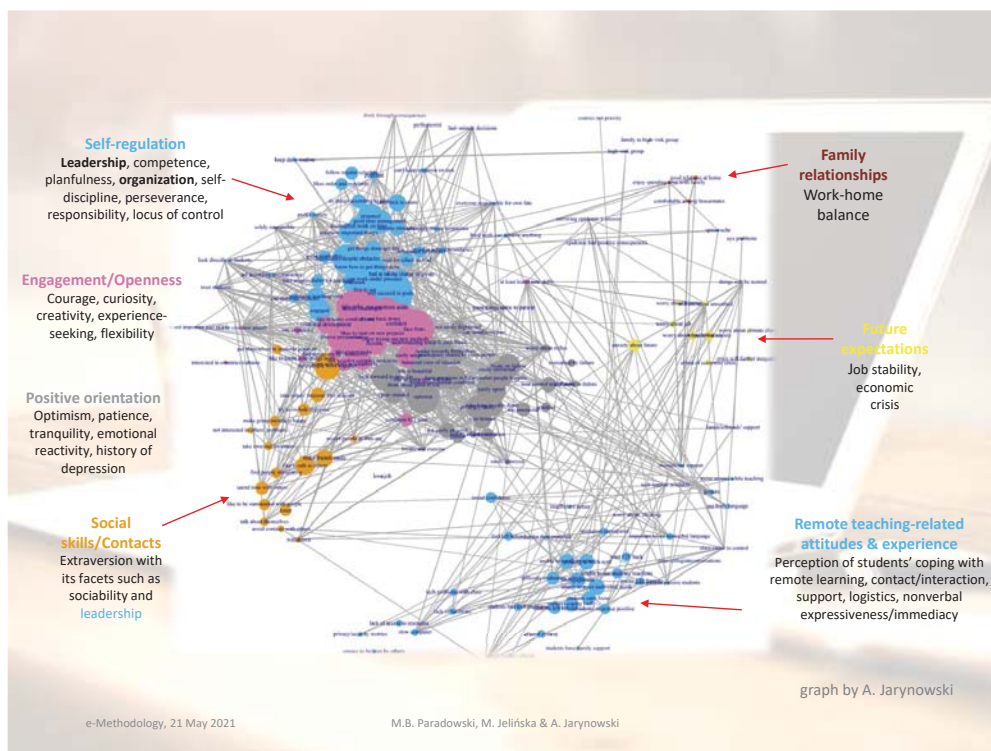| Independent variables	b	SE	β	t	R^2	η_p^2	95%CI		F	p
Intercept	.78	.37		2.11		.01			4.46	.035
Student challenges	.74	.04	.58*	16.77	.36	.32	.27	.37	281.37	.000
Prior RT experience	−.23	.04	−.15*	−5.19	.14	.04	.02	.07	26.90	.000
Technological challenges	−.17	.04	−.13*	−3.93	.26	.03	.80	.83	15.43	.000
L2 proficiency – A1	−.18	.08	−.09*	−2.23	.51	.01	.00	.02	1.85	.026
L2 proficiency – B1	.07	.04	.06	1.78	.31	.01	.00	.02	3.18	.075
Estimated students' progress	−.07	.04	−.05	−1.76	.19	.01	.00	.02	3.11	.078
Language school	.00	.00	.05	1.53	.20	.00	.00	.02	2.35	.126
Teaching experience	.30	.19	.06	1.62	.39	.01	.00	.02	2.24	.105
Education stage handled (tertiary)	.01	.00	.05	1.44	.44	.00	.00	.02	2.09	.149
Gender (male)	.28	.21	.08	1.34	.79	.01	.00	.01	1.67	.182
L2 proficiency – C2	−.07	.06	−.04	−.10	.16	.00	.00	.01	1.43	.232
Virtual background (no)	.08	.05	.05	−.20	.14	.00	.00	.01	1.17	.129

Slide 4

Did multilingualism help the transition to ERT?

- Although 'more polyglot' *teachers* eventually found remote teaching harder than initially expected (r = .223**), they were consistently less likely to make huge adjustments to their lives (−.278**) or instruction (−.373**). They were more likely to believe that they will come out unscathed (.252**). They felt their students were coping well (.302**), and their classes tended to be longer (.271**). They were also missing lost conference trips the most (.314**).

- Correlations between multilingualism and pandemic handling among *language learners* are weaker; among the interesting ones are (again) ruined travel plans (.188**), missing daily conversations with and feeling physically isolated from classmates (.183**; .163**), feeling that their situation was not the worst (.147**), they were doing well in class (.132**) and had been through crises before (.125**).

- Higher competence in background languages also weakly correlated with personality traits such as love of learning (.185**), perseverance and self-discipline (.168**; .130**), creativity and curiosity (.166**; .121*), flexibility (.146**) and competence (.139**).

Note: * = p <.05, ** = p <.01

Self-regulation
Leadership, competence, planfulness, **organization**, self-discipline, perseverance, responsibility, locus of control

Engagement/Openness
Courage, curiosity, creativity, experience-seeking, flexibility

Positive orientation
Optimism, patience, tranquility, emotional reactivity, history of depression

Social skills/Contacts
Extraversion with its facets such as sociability and leadership

Family relationships
Work-home balance

Future expectations
Job stability, economic crisis

Remote teaching-related attitudes & experience
Perception of students' coping with remote learning, contact/interaction, support, logistics, nonverbal expressiveness/immediacy

graph by A. Jarynowski

- Self-regulation, openness/engagement, positive orientation and extraversion are highly interconnected clusters (communities) comprising the most influential variables
- Positive orientation cluster most central in the network
- Remote teaching-related attitudes and experiences connected to a greater extent with future expectations and to a lesser extent with the positive orientation cluster
- Extraversion cluster almost unconnected to remote teaching-related attitudes and experiences and seems to be of lesser importance

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Variables predicting negative affect

Table 4. Multiple linear regression model built with ANCOVA (forward selection) for variables predicting teachers' negative affect

Step	Independent variables	b	SE	β	t	η_p^2	95%CI		F
1	Situational anxiety	0.64	0.09	0.30	6.82	.54	.47	.58	46.58
2	Work-life synergy	−2.24	0.38	−0.25	−5.81	.46	.38	.50	33.71
3	Productivity:					.30	.22	.35	16.98
	reduced	4.31	0.77	0.26	5.62				
	equal	−2.42	0.70	−0.15	−3.50				
4	Coping: worse than others	5.75	1.82	0.26	3.16	.17	.09	.21	8.14
5	Age	−0.17	0.05	−0.16	−3.77	.26	.18	.31	14.21
6	Situational loneliness	0.33	0.16	0.09	2.04	.10	.03	.13	4.16
–	Family and social support								
–	Gender								
–	Relationship status								
–	Living conditions								
–	Professional experience								

b – unstandardised regression coefficient; SE – standard errors; β – standardised regression coefficient

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Thank you for your attention!

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Read more at http://schoolclosure.ils.uw.edu.pl/publications

Jelińska, M. & Paradowski, M.B. (2021). Teachers' engagement in and coping with emergency remote instruction after COVID-19-induced school closures: A multinational contextual perspective. *Online Learning Journal, 25*(1), 303–328. [special issue "Lessons about online learning from COVID-19"]. DOI: 10.24059/olj.v25i1.2492

Jelińska, M. & Paradowski, M.B. (2021). Teachers' perception of student coping with emergency remote instruction during the COVID-19 pandemic: The relative impact of educator demographics and professional adaptation and adjustment. *Frontiers in Psychology, 12*, 648443. [Research Topic "Coronavirus Disease (COVID-19): Psychoeducational Variables Involved in the Health Emergency"]. DOI: 10.3389/fpsyg.2021.648443

Jelińska, M. & Paradowski, M.B. (2021). The impact of demographics, life and work circumstances on college and university instructors' well-being during quaranteaching: Findings from a global survey [working title]. *Frontiers in Psychology* [Research topic "Covid-19 and beyond: From (forced) remote teaching and learning to 'the new normal' in higher education"]. DOI: 10.3389/fpsyg.2021.643229