

Online learning and the school closures

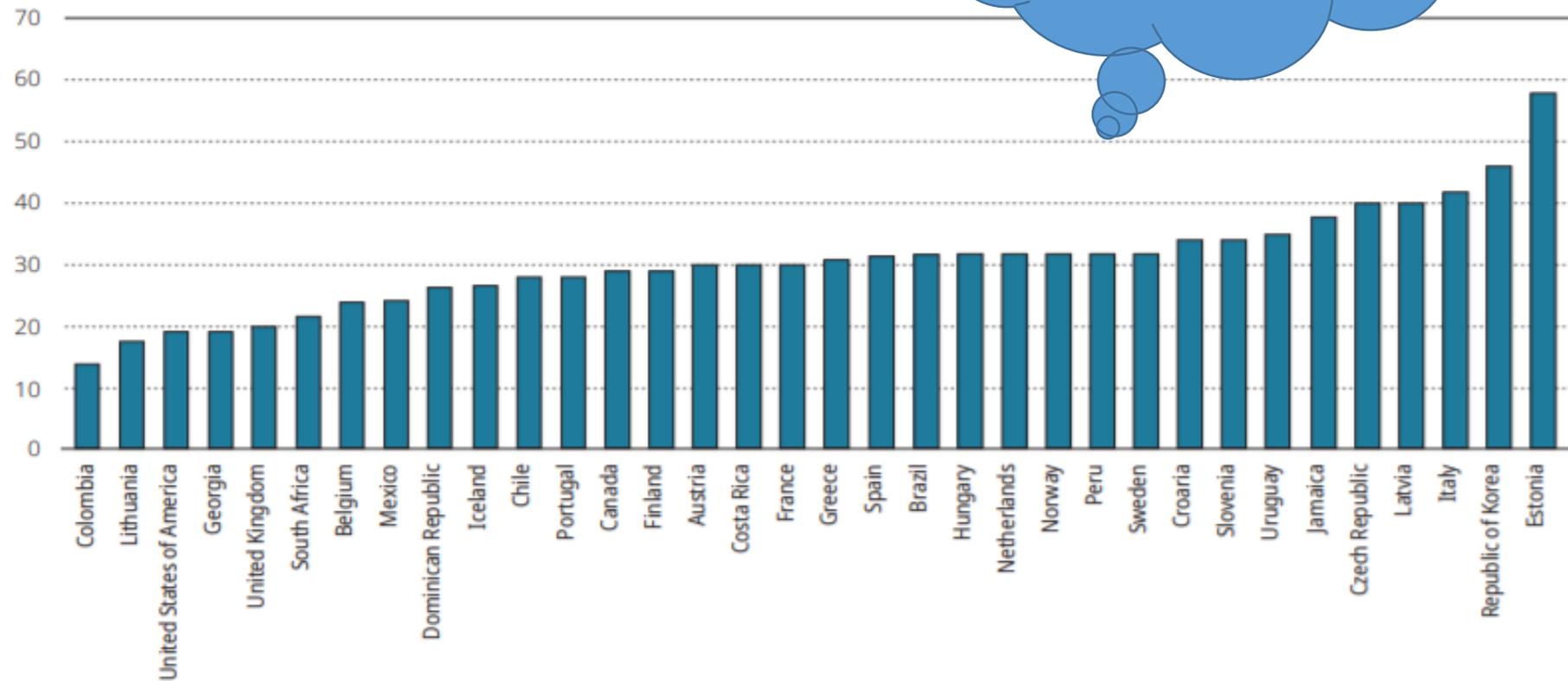
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School closure (first one)

1.5 billion learners affected, 90% of all students in the world

Figure 1 • Days of schooling lost by mid-May 2020



Source: OECD/Harvard University, (2020₁₅) Global Education Innovation Initiative at Harvard and OECD Rapid Assessment of COVID-19 Education Response.



HOW TO SAVE PAPER

Follow the golden rule: think before you print
Printing the good stuff is the only way forward. So the next time you are about to press that button, ask yourself the golden rule of saving paper: Do I really need to print this?

Recycle the paper you have and ask for recycled paper products
Collect the paper you use and then reuse where possible. And when you do have to buy new paper, make sure it is recycled.

Avoid printing out single line e-mails or unnecessary copies of documents
Again just follow the golden rule and ask yourself whether you really need to be sent.

Use both sides of the sheet of paper
This is a real easy way of reducing your paper consumption by 50%. Set your printer to print on both sides. Double-sided printing may mean more handling.

Use technology
E-readers, e-mail, tablets and document scanners can help reduce paper use, while also saving you time and money.





En hoe gaat het met jou?

14:58 ✓

And how are you?

goed. ik wil terug naar school.

15:00

Good. I wanna come back to school

Ah ik wil jou ook graag weer zien

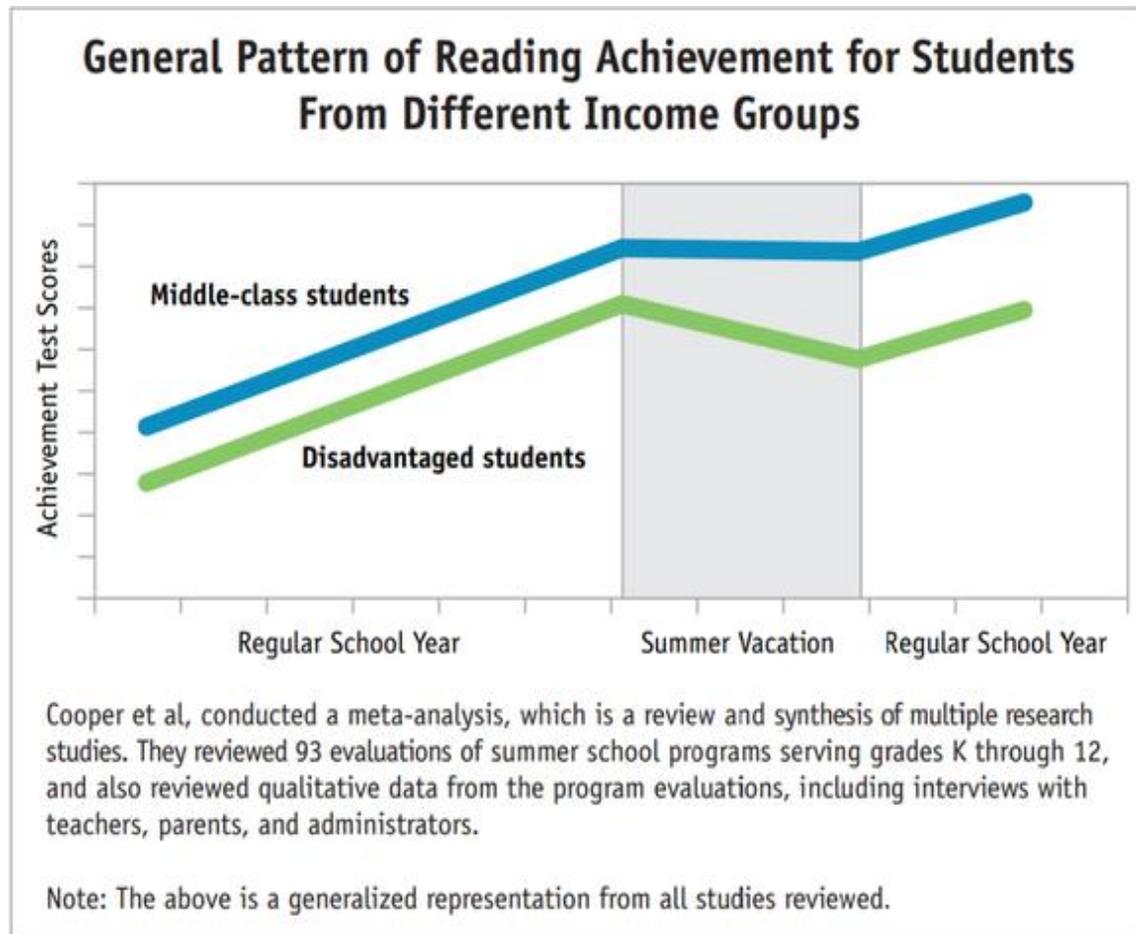
15:00 ✓

Ah, I would really wish to see you again as well.

ik u ook ik ben me moeder al zat.

Me too. I'm already fed up with my mom.

Red flags: learning loss



What Happens to Children DURING THE SUMMER?

During the summer months, disadvantaged children tread water at best or even fall behind. It's what we call

"SUMMER SLIDE"

while better off children build their skills steadily over the summer months.

SUMMER LEARNING LOSS

accounts for about two-thirds of the ninth grade achievement gap in reading.'

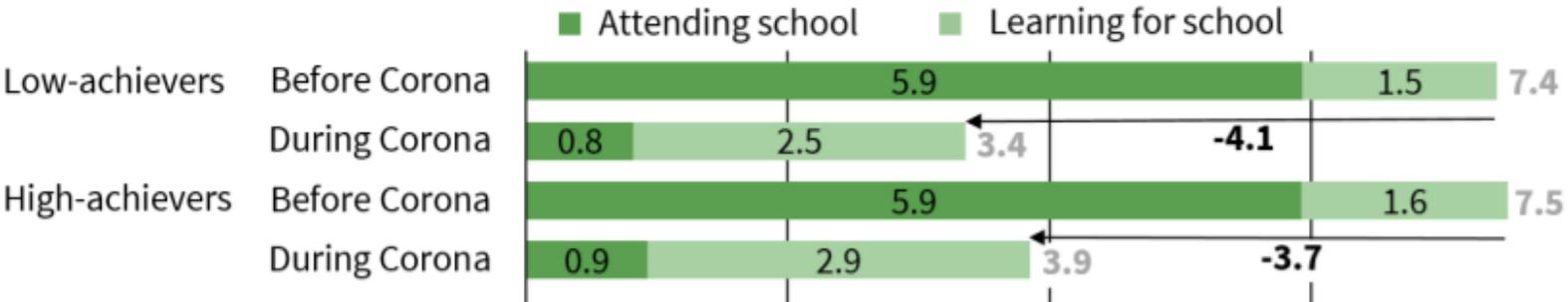
Average months of learning lost in scenario 2 compared with typical in-classroom learning²

Low-quality
remote learning

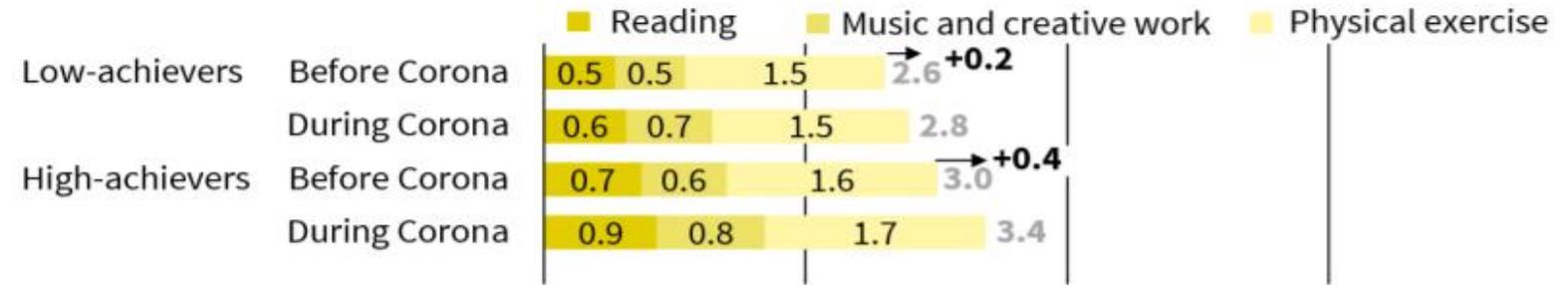


Grewenig, Lergeporter, Werner, Woessman & Zierow (2020)

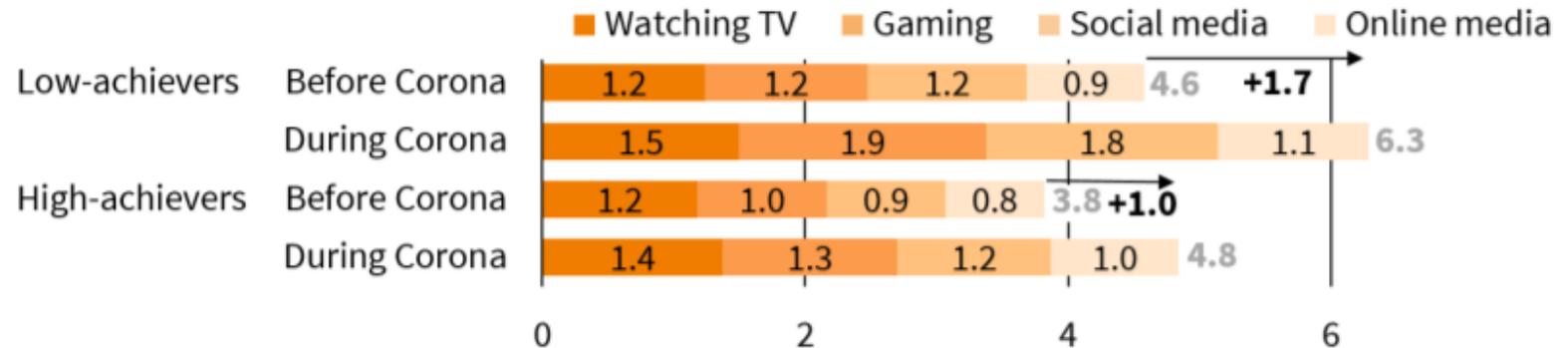
School activities



Conducive activities

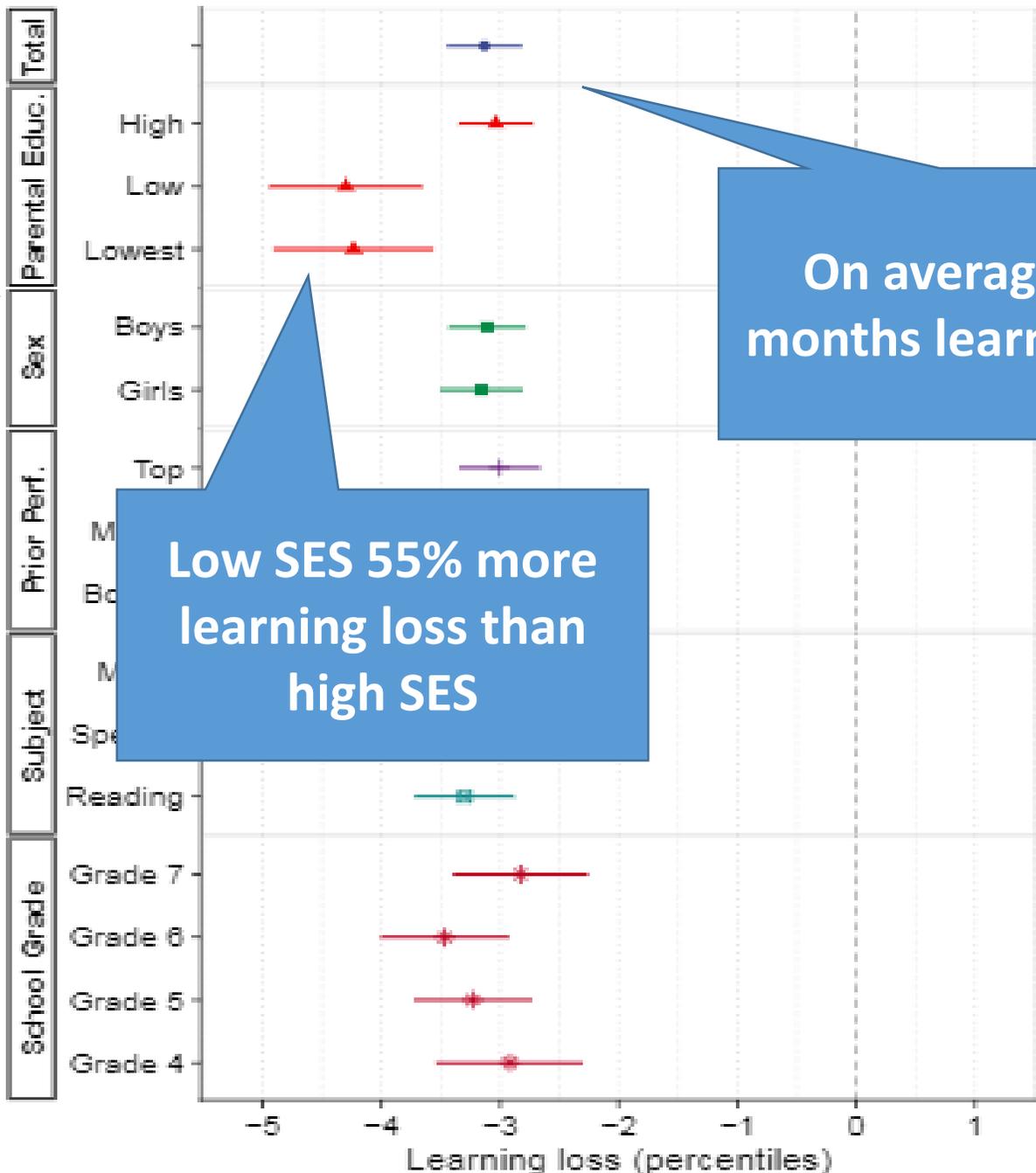


Detrimental activities



Engzell, Frey & Verhagen (2020)

Language & Math



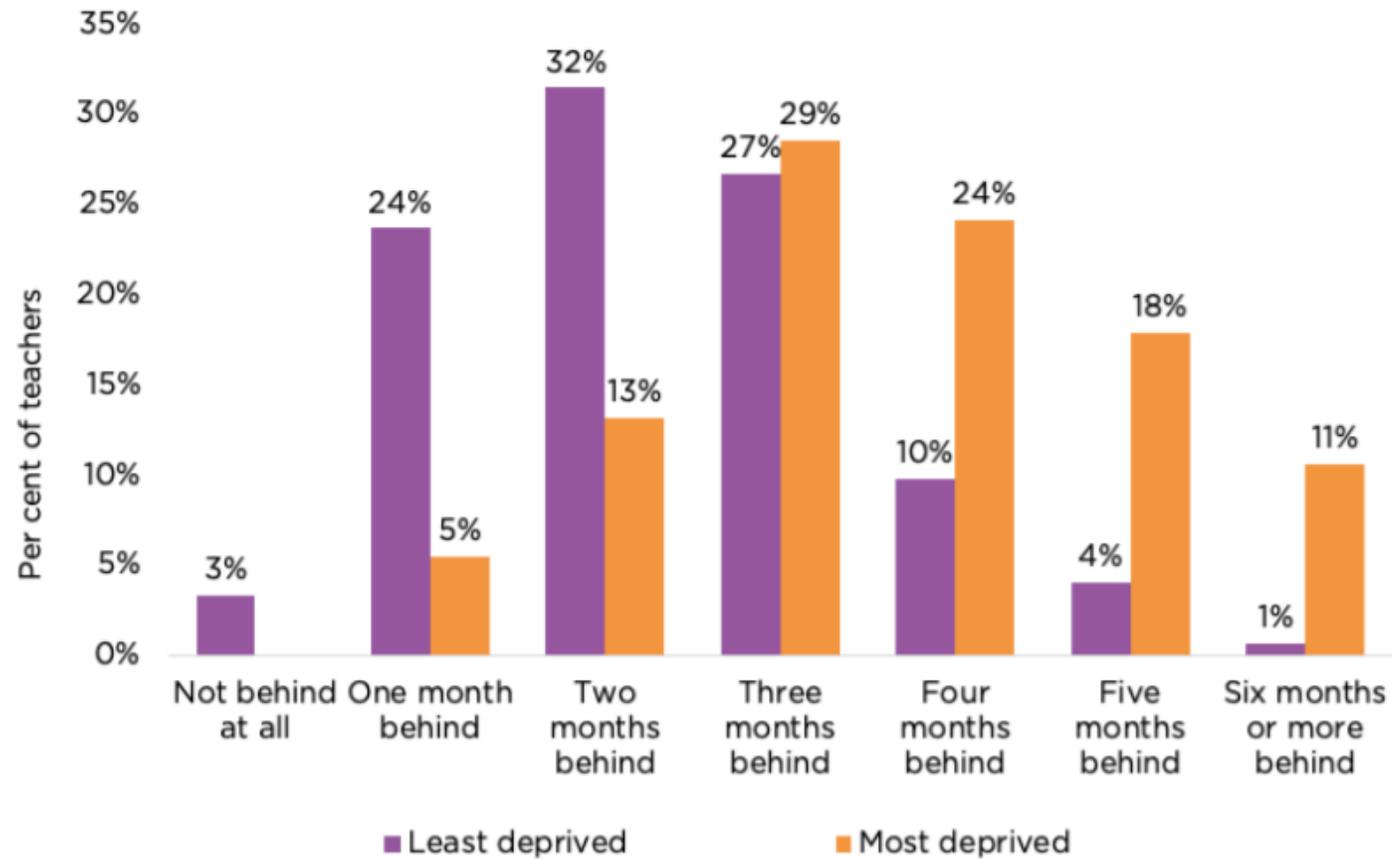
On average two months learning loss

1000 students

Low SES 55% more learning loss than high SES

Conclusions?

Sharp, Nelson, Lucas, Julius, McCrone & Sims (2020)



Economic costs: Hanushek & Wossman (2020)

	GDP 2019 (billions USD)	Impact of Lost Learning (billions USD)	
		-1/3 year learning	-2/3 year learning
Argentina	990	-683	-1 347
Australia	1 262	-871	-1 716
Brazil	3 092	-2 134	-4 205
Canada	1 843	-1 272	-2 507
China	22 527	-15 543	-30 636
France	3 097	-2 137	-4 212
Germany	4 474	-3 087	-6 084
India	9 229	-6 368	-12 552
Indonesia	3 197	-2 206	-4 347
Italy	2 557	-1 765	-3 478
Japan	5 231	-3 609	-7 114
Republic of Korea	2 206	-1 522	-3 000
Mexico	2 519	-1 738	-3 426
Russian Federation	3 968	-2 738	-5 397
Saudi Arabia	1 609	-1 110	-2 189
South Africa	731	-504	-994
Turkey	2 350	-1 621	-3 196
United Kingdom	3 121	-2 154	-4 245
United States	20 575	-14 197	-27 982

The Effectiveness of Online and Blended Learning: A Meta-Analysis of the Empirical Literature

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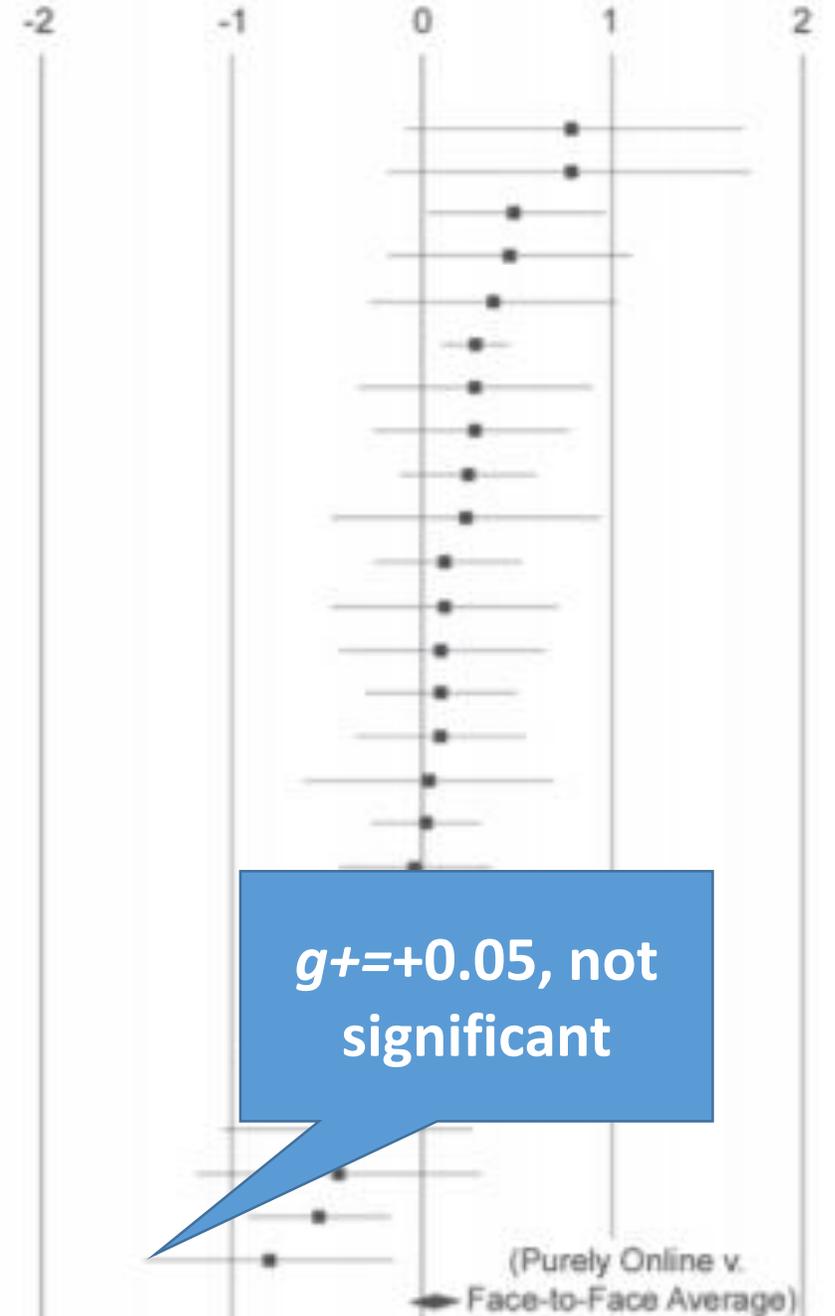
Study

Purely Online v. Face-to-Face

- Schoenfeld-Tacher, McConnell and Graham (2001)
- Beyea et al. (2008)
- Zhang et al. (2006)
- Cavus, Uzunboyulu and Ibrahim (2007)
- Zhang (2005)
- Beeckman et al. (2008)
- Nguyen et al. (2008)
- Bello et al. (2005)
- Sun, Lin and Yu (2008)
- Turner et al. (2006)
- Vandeweerd et al. (2007)
- Caldwell (2006) [online]
- Padalino and Peres (2007)
- Wallace and Clariana (2000)
- Hugenholtz et al. (2008)
- Benjamin et al. (2007)
- Hairston (2007)
- Ocker and Yaverbaum (1999)
- Wang (2008)
- Peterson and Bond (2004)
- Schmeeckle (2003)
- Lowry (2007)
- Harris et al. (2007)
- Davis et al. (1999) [online]
- Sexton, Raven and Newman (2002)
- Jang et al. (2005)
- Mentzer, Cryan and Teclhaimanot (2007)

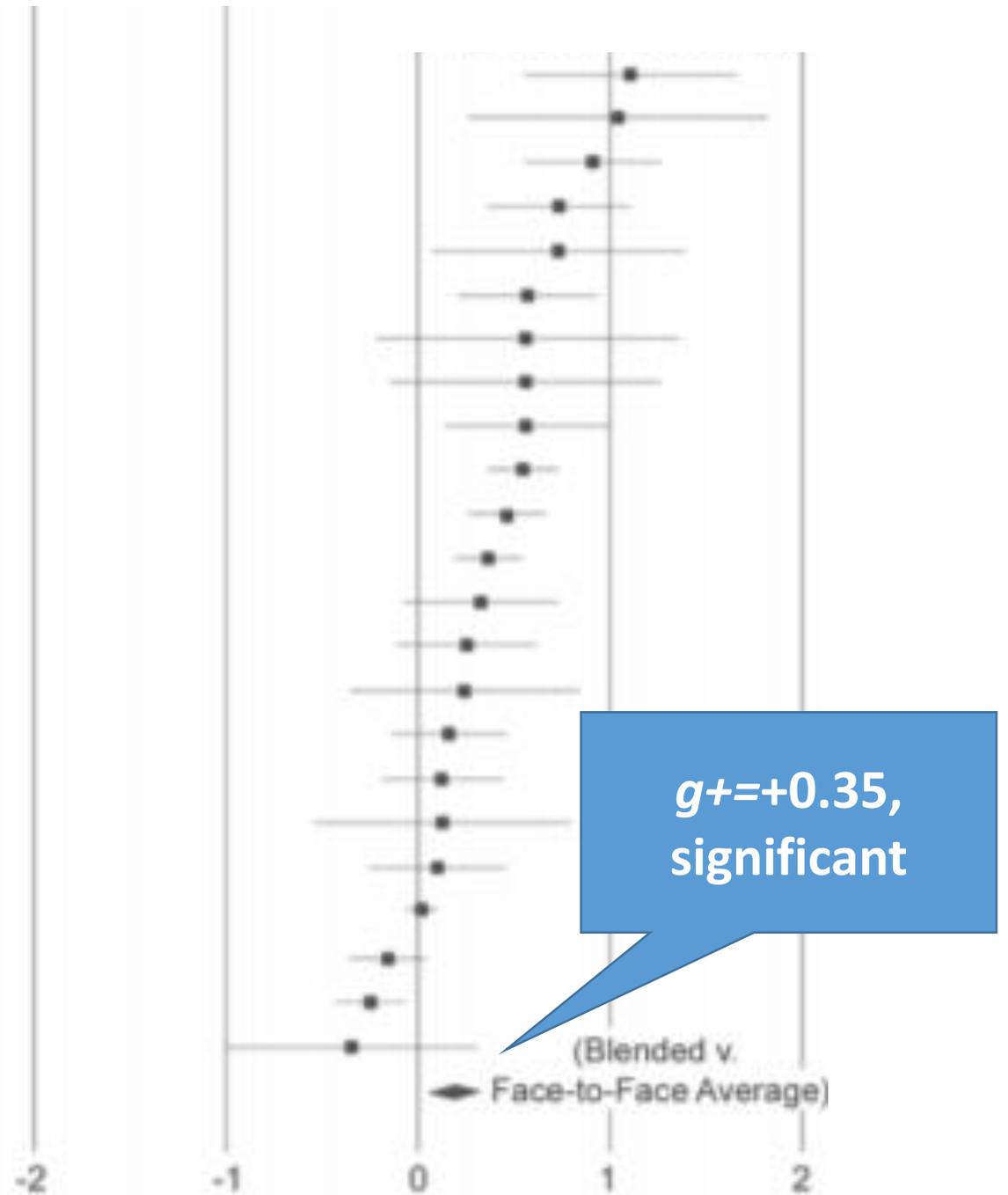
continued v. Face-to-Face

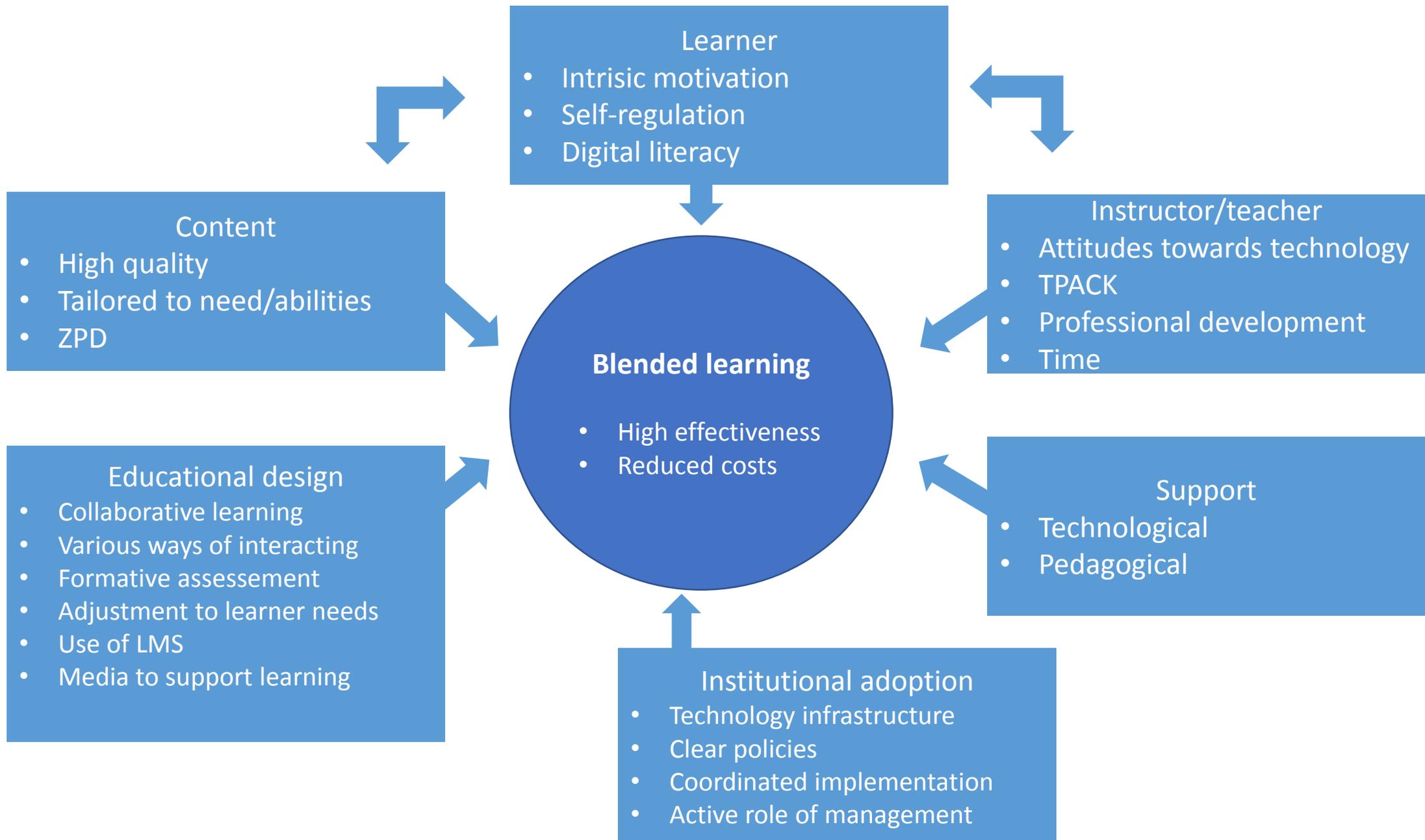
Hedges g and 95% Confidence Interval



Blended v. Face-to-Face

- Day, Raven and Newman (1998)
- El-Deghaidy and Nouby (2008)
- Schilling et al. (2006) [search strategies]
- Al-Jarf (2004)
- Englert et al. (2007)
- Schilling et al. (2006) [calculation]
- Aberson et al. (2003)
- Spires et al. (2001)
- Zacharia (2007)
- Long and Jennings (2005) [wave 2 study]
- Gilliver, Randall and Pok (1998)
- O'Dwyer, Carey and Kleiman (2007)
- Midmer, Kahan and Marlow (2006)
- Urban (2006)
- Caldwell (2006) [blended]
- Maki and Maki (2002)
- Suter and Perry (1997)
- Frederickson, Reed and Clifford (2005)
- DeBord, Aruguete and Muhlig (2004)
- Long and Jennings (2005) [wave 1 study]
- Rockman et al. (2007) [multiple choice]
- Rockman et al. (2007) [writing]
- Davis et al. (1999) [blended]





In conclusion



**What Can We Do About
COVID-19 LEARNING LOSS?**



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