The influence self-regulated learning in online learning

A/Professor Jaclyn Broadbent

Self regulated-learning

‘refers to self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals’ (Zimmerman 2000 p.14)

https://www.ericrovner.com/kid-rock

Do students use self-regulated learning strategies differently online?

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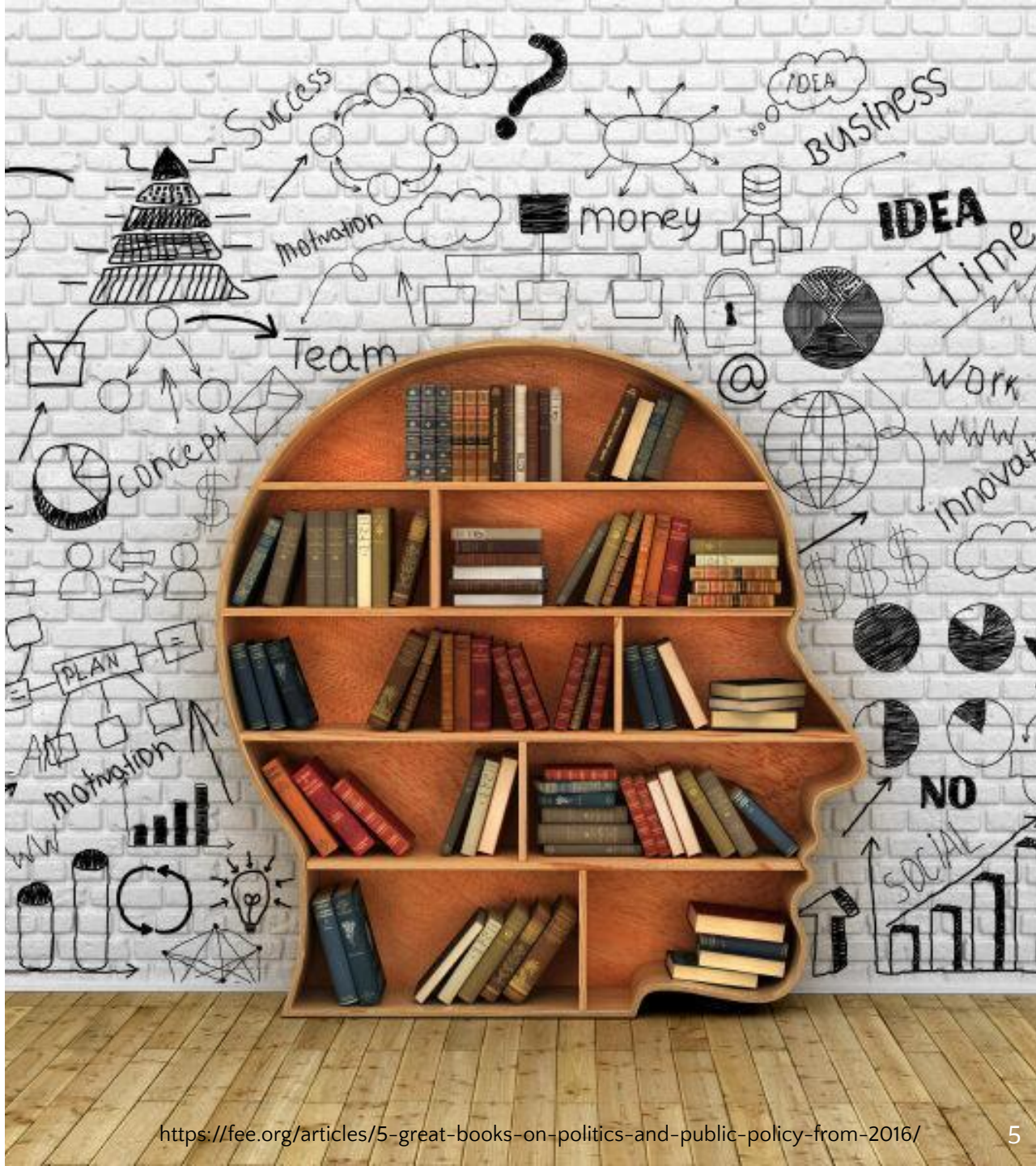
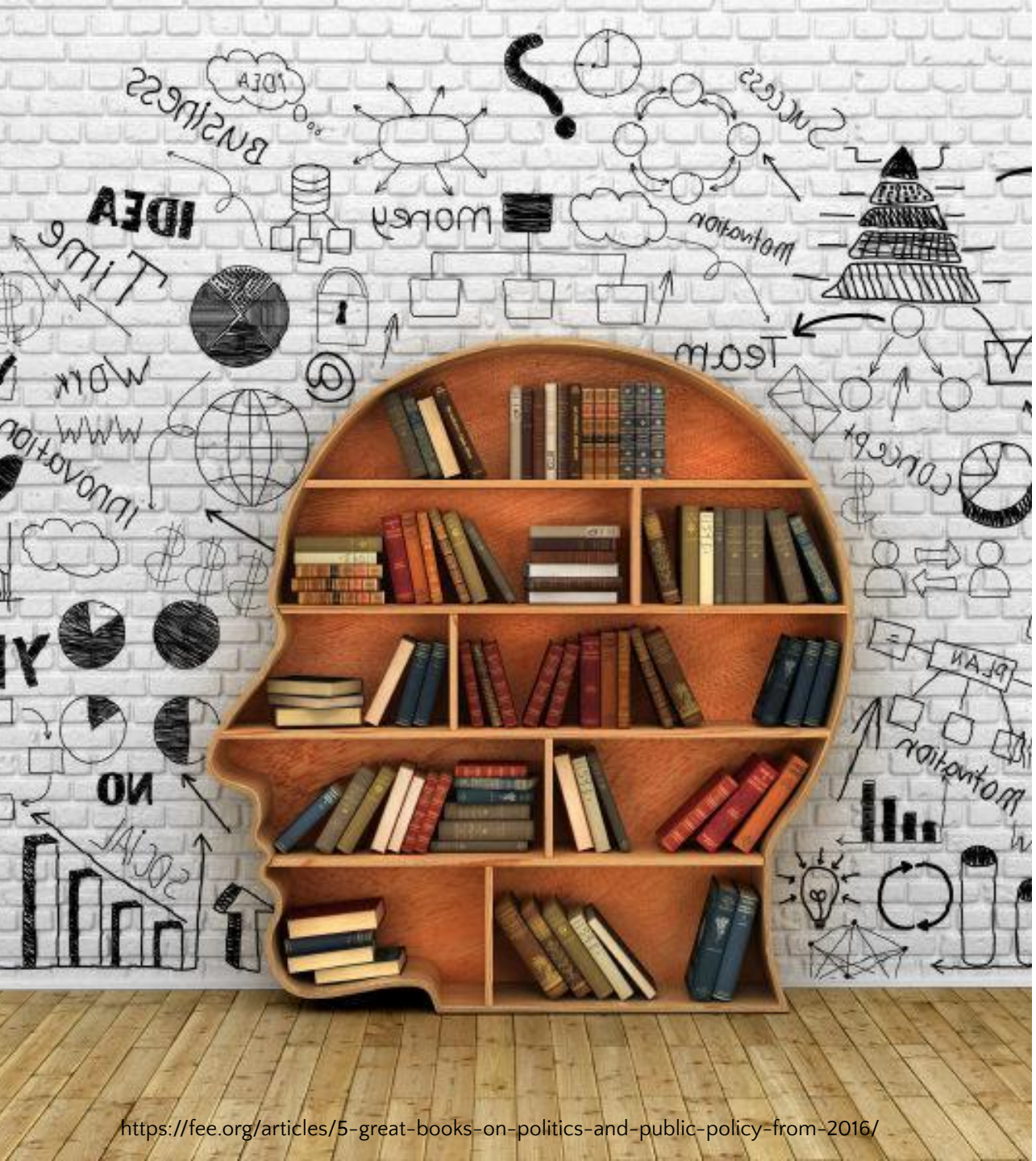


https://fee.org/articles/5-great-books-on-politics-and-public-policy-from-2016/



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Time Management

Metacognition

Effort Regulation

Critical Thinking

Peer learning

Elaboration

Rehearsal

Organisation

Help seeking

Review of the literature

Gap 1: There had been no review of the relationship between SRL strategy use and academic performance for online learners.

Study 1
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Gap 2: There is variation between studies regarding which SRL strategies have been evaluated in relation to the academic performance of online learners.

Gap 3: Few studies directly compared SRL use and subsequent academic performance in online vs blended learning contexts.

Gap 4: Much of the literature assumes SRL factors work uniformly across students and context.

Study 2
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Broadbent, J., Sharman, S., Panadero, E., & Fuller-Tyszkiewicz, M. (2021). How does self-regulated learning influence formative assessment and summative grade? Comparing online and blended learners. *The Internet and Higher Education, 50*.

Study 4
Broadbent, J. & Fuller-Tyszkiewicz (2018). Profiles in Self-Regulated Learning and their correlates for online and blended learning students. *Educational Technology Research and Development, 66*(6), 1435-1455.

Research Question 1: what self-regulated learning strategies do academically successful online learners report using?

Gap 5: Some SRL intervention approaches exist within the classroom context, but less is known about online interventions.

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Gap 6: There is a need to test an online SRL enhancement program that addresses some of the challenges of implementing successful online interventions.

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Research Question 2: can SRL strategy use be improved with an online intervention?

https://www.bostonglobe.com/opinion/editorials/2017/11/27/online-learning-can-ease-economic-inequality/Z4TYVHIX6GuSR7pYjEopnK/story.html

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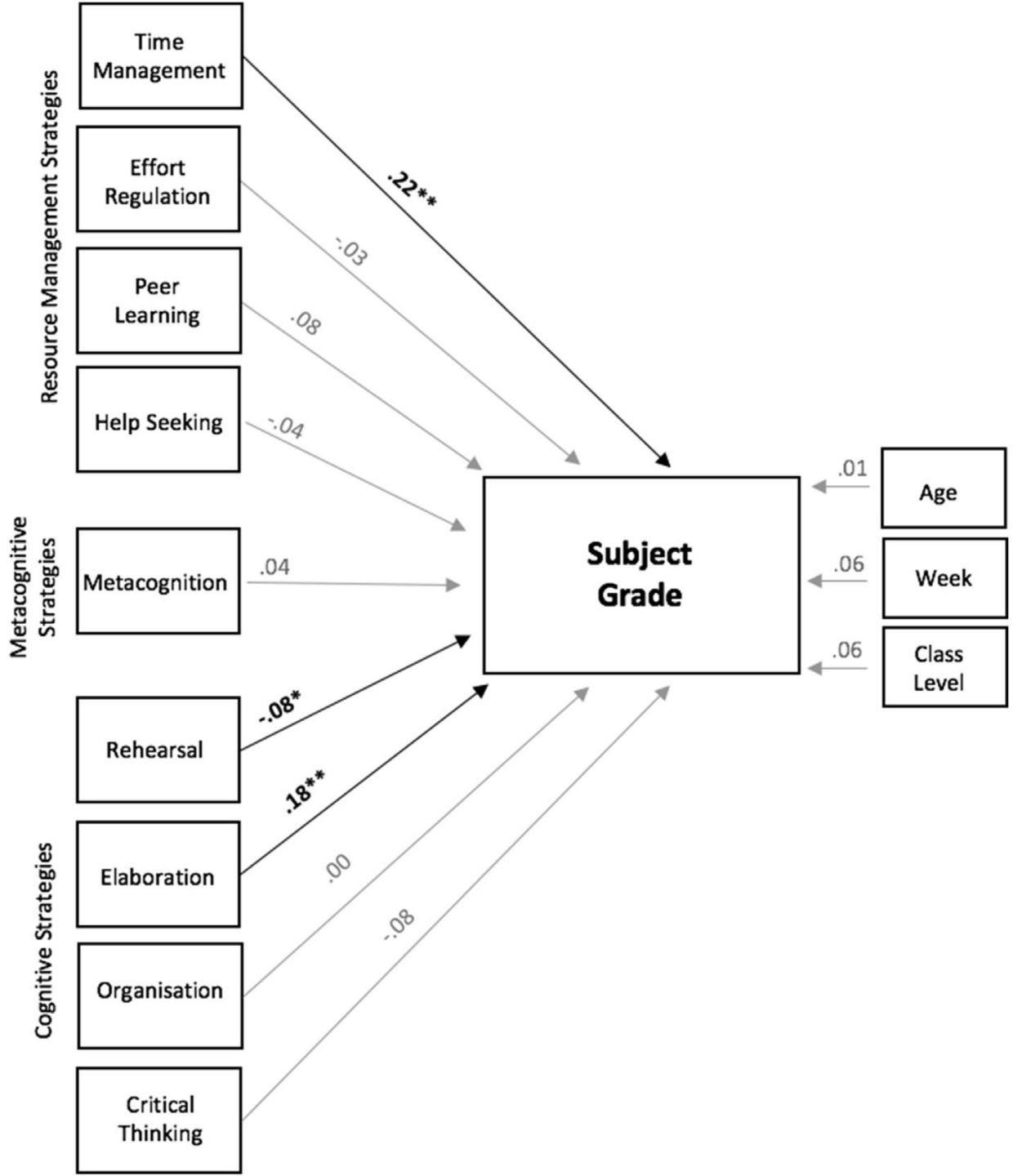
Resource Management Strategies
Time Management
Effort Regulation
Peer Learning
Help Seeking
Metacognitive Strategies
Metacognition
Cognitive Strategies
Rehearsal
Elaboration
Organisation
Critical Thinking
.22**
-.03
.08
-.04
.04
-.08*
.18**
.00
-.08
Subject Grade
.01
Age
.06
Week
.06
Class Level

Study 3: Specific learning scenario

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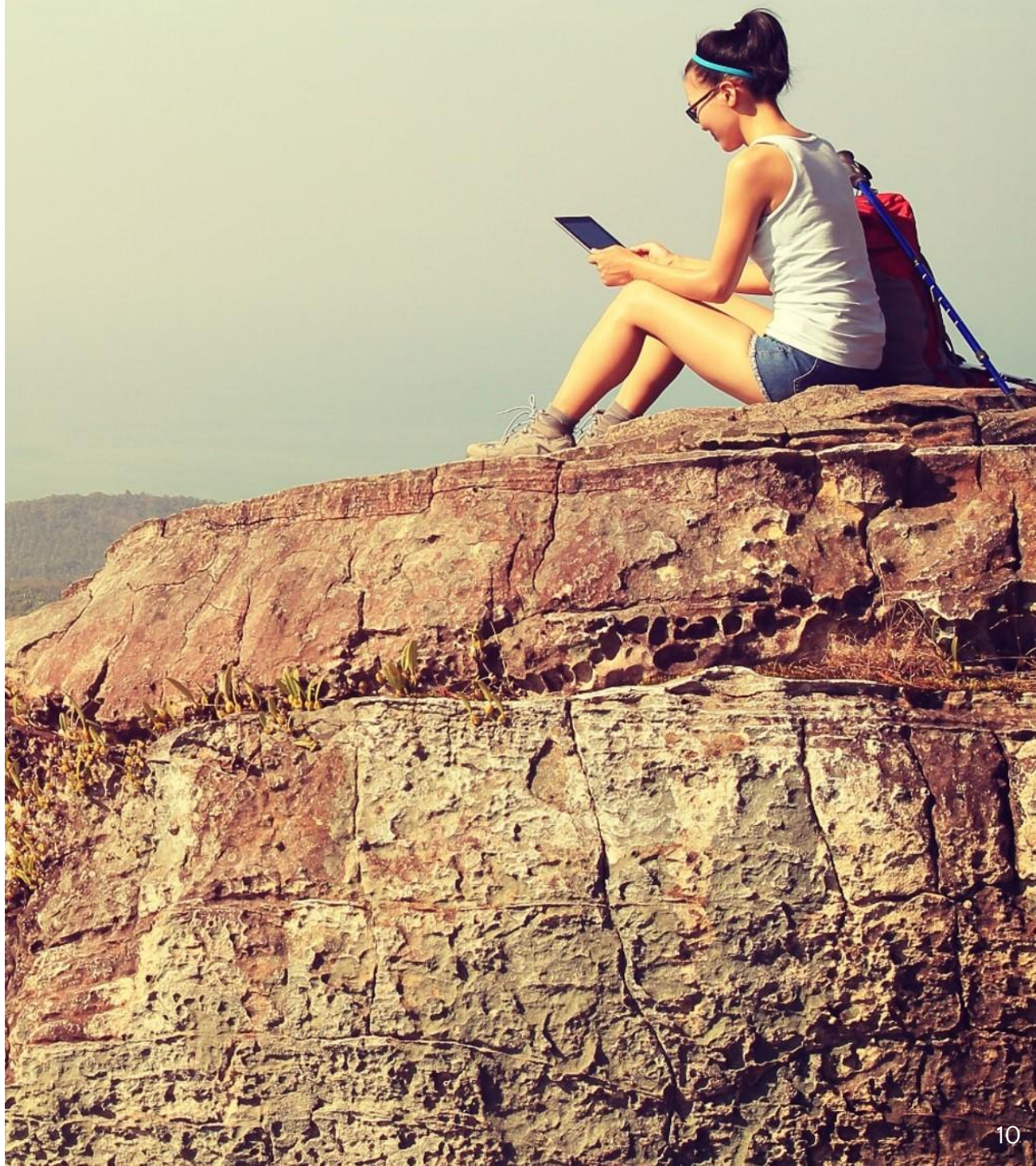

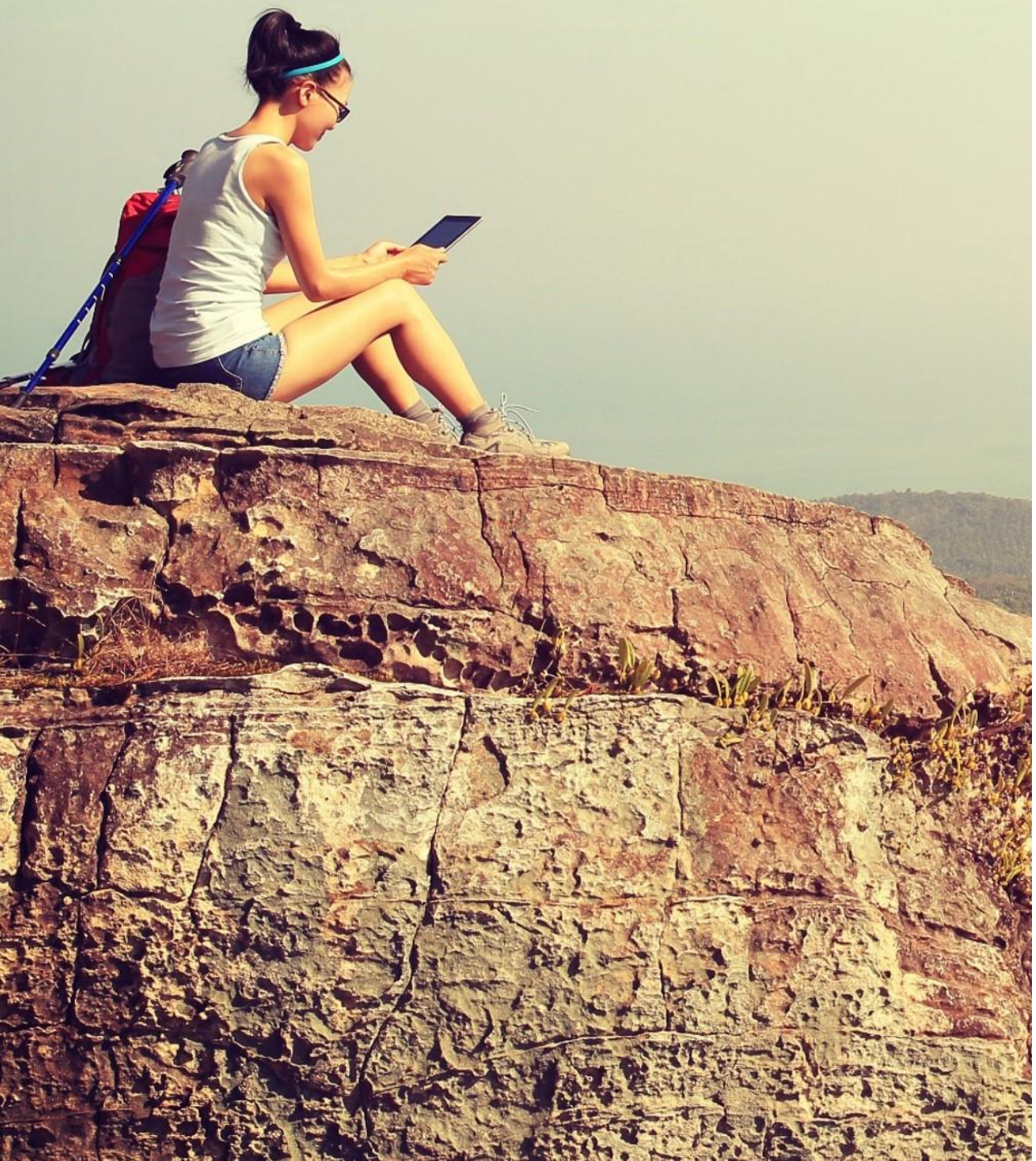

As an aside……

Honicke, T., & Broadbent, J. (2016). The influence of academic self-efficacy on academic performance: A systematic review. Educational Research Review, 17, 63-84.

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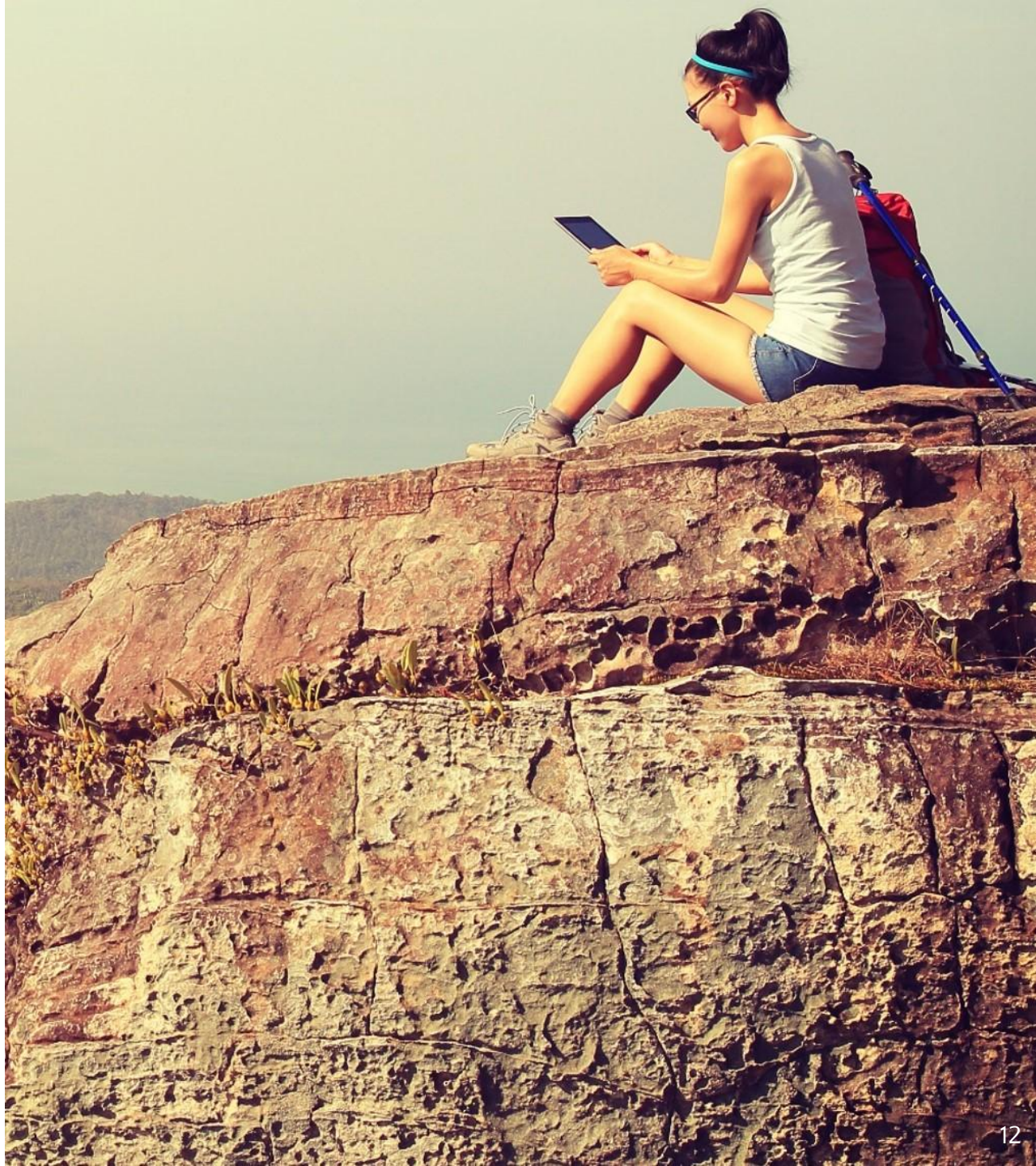


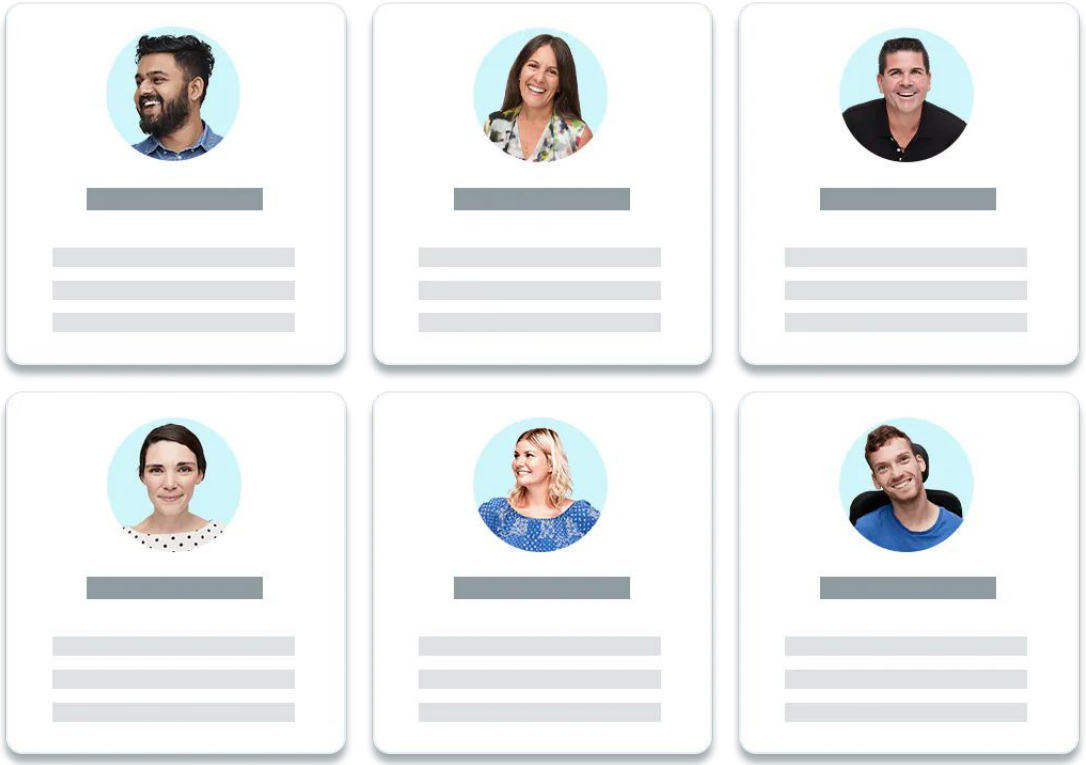
Specific learning scenario

Online learners scored higher than blended learners on all variables

There was no difference in grades between online and blended learners. On average both groups improved ~15%

Time management, effort regulation and self-efficacy to be the most predictive of academic achievement for online learners.

Effort regulation and self-efficacy to be the most predictive of academic achievement for blended learners.



https://hireup.com.au/tips-for-profiles/

Study 4: SRL Profiles

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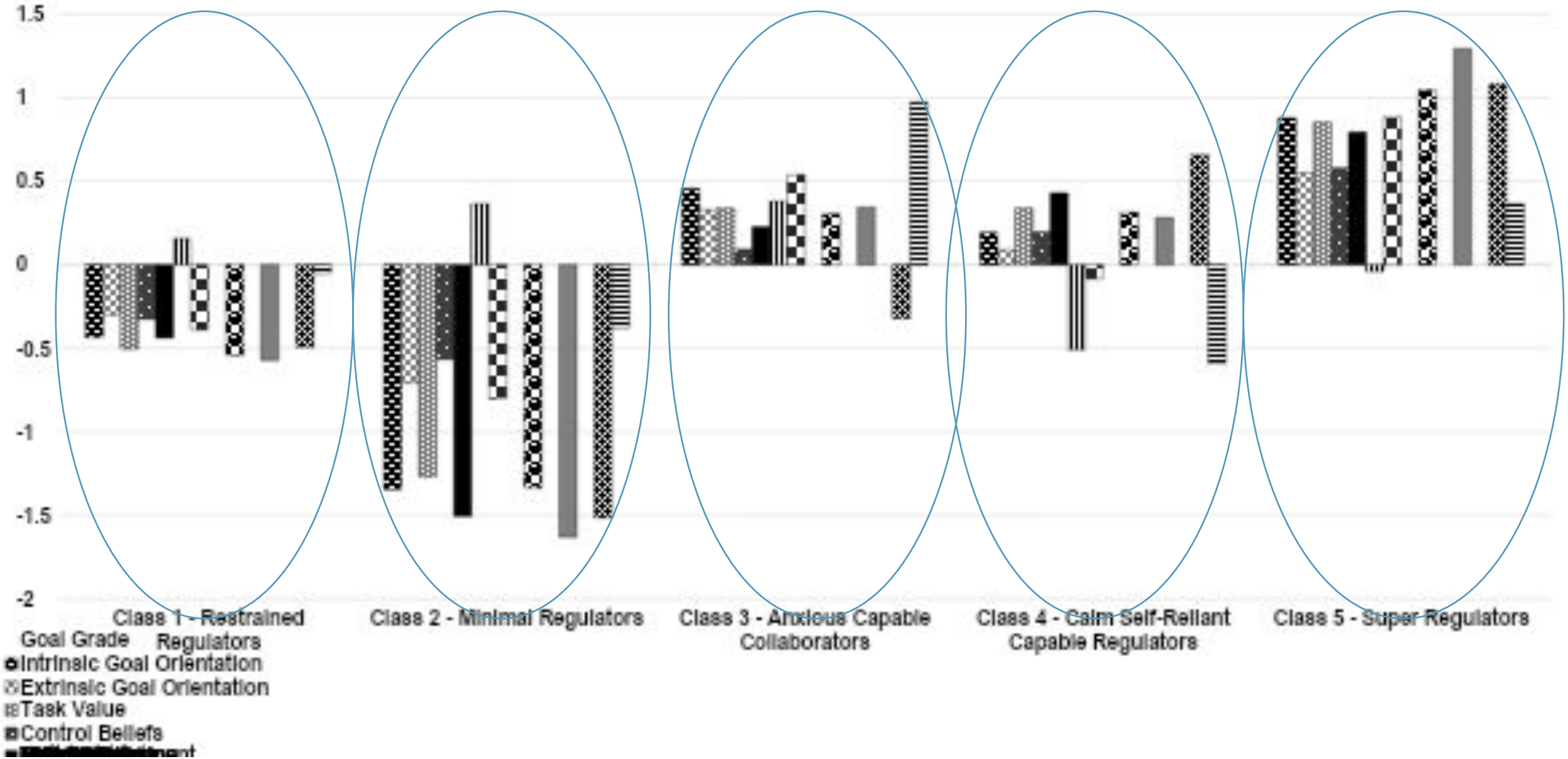
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Class 1 - Restrained Regulators
Class 2 - Minimal Regulators
Class 3 - Anxious Capable Collaborators
Class 4 - Calm Self-Reliant Capable Regulators
Class 5 - Super Regulators
Goal Grade
Intrinsic Goal Orientation
Extrinsic Goal Orientation
Task Value
Control Beliefs

	Class 1 Restrained Regulators[a]	Class 2 Minimal Regulators[b]	Class 3 Anxious Capable Collaborators[c]	Class 4 Calm Self-Reliant Capable Regulators[d]	Class 5 Super Regulators[e]
Age	22.03[d,e]	21.50[d,e]	21.64[d,e]	25.59[a,b,c]	26.00[a,b,c]
Grade	71.51[b,d,e]	64.48[a,c,d,e]	71.12[b,d,e]	76.02[a,b,c]	76.17[a,b,c]
Intention	16.23[b,c,d,e]	14.63[a,c,d,e]	16.89[a,b,d,e]	18.57[a,b,c,e]	19.45[a,b,c,d]
Automaticity	10.32[b,d,e]	8.06[a,c,d,e]	11.17[b,d,e]	12.41[a,b,c,e]	14.68[a,b,c,d]
Female^	.82[e]	.85	.79[e]	.88	.94[a,c]
On campus^	.86[d,e]	.83[d,e]	.87[d,e]	.68[a,b,c]	.60[a,b,c]

^Denotes categorical variables for which the reported mean values range from 0 to 1, and represent proportions (i.e., 0.4 for female indicates that 40% of the participants in a given class are female). Post-hoc comparisons were adjusted for Type I error inflation

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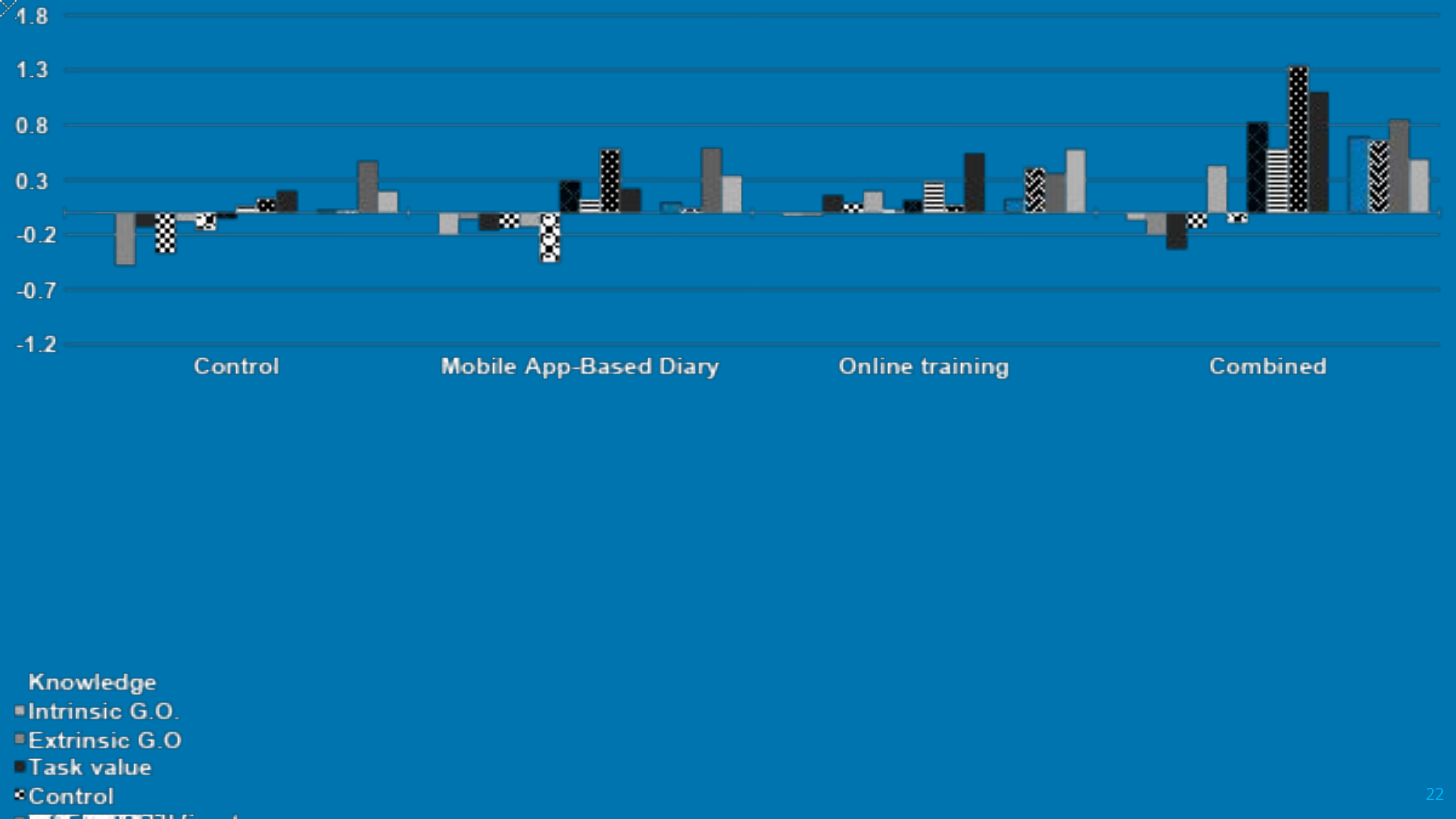
1	**Inferring SRL (meta)cognitive processes through behavioural data**
2	Unexplored effects of the SRL interventions on learning and performance
3	Capturing the whole SRL process with all its phases rather than segments
4	Domain specific or non-specific interventions
5	Change agent decision
6	Capacity of the technology-based SRL interventions to enhance the students' independent development of SRL

Study 6: SRL Intervention

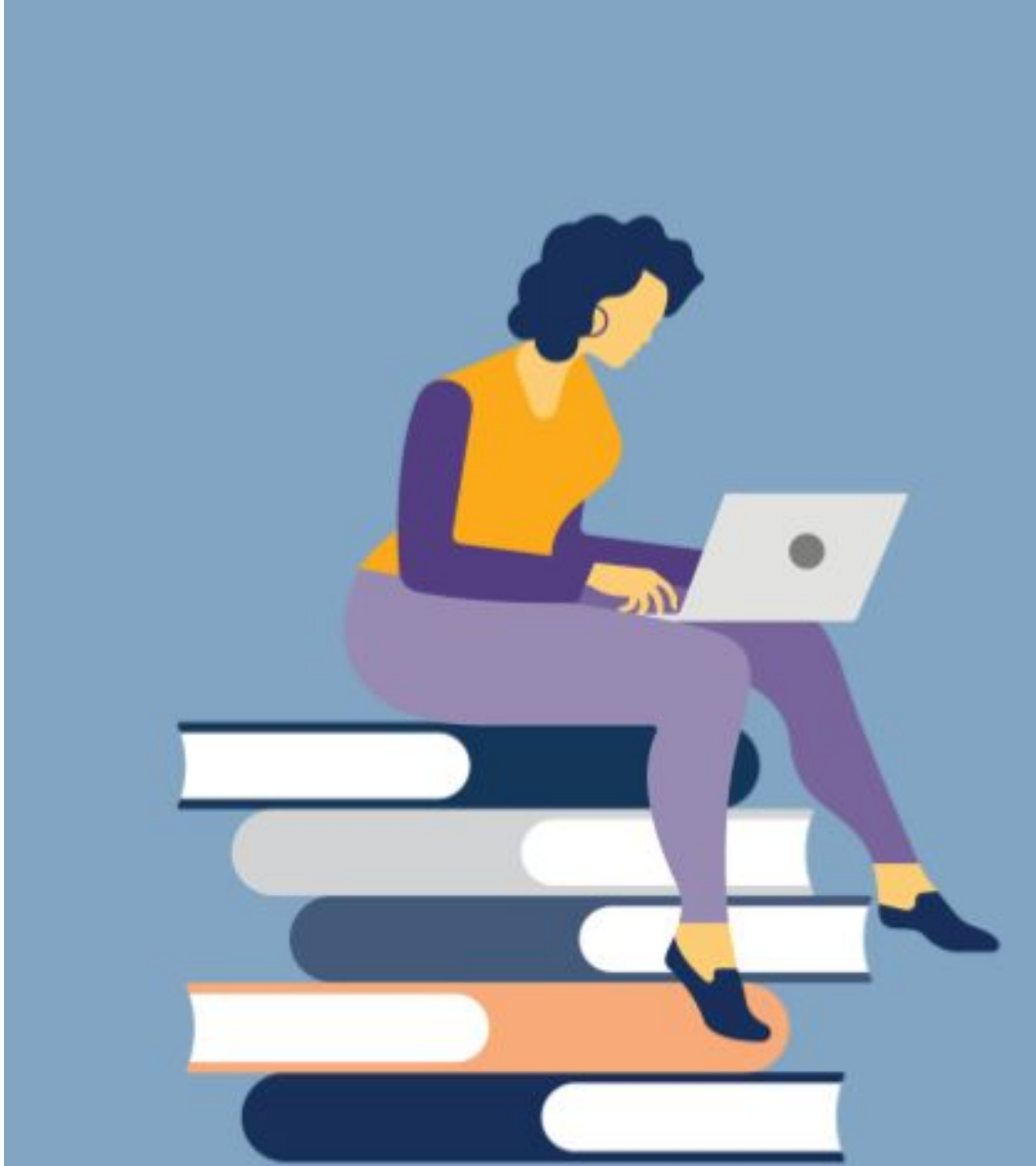
Broadbent, J., Panadero, E., & Fuller-Tyszkiewicz, M. (2020). Effects of mobile-app learning diaries vs online training on specific self-regulated learning components. *Education Technology Research and Development*.

Randomised control study with four conditions

Online discipline-independent training Three 60-90-minute sessions over 21 days *n*=16	**Mobile-app based discipline-independent diaries** Completed daily for 21 days *n*=21
Combined training and diaries Three 60-90-minute training sessions over 21 days + Daily Diaries for 21 days *n*=14	**Control** Learners did not engage in any intervention. *n*=22


1.8
1.3
0.8
0.3
-0.2
-0.7
-1.2
Control
Mobile App-Based Diary
Online training
Combined
Knowledge
Intrinsic G.O.
Extrinsic G.O
Task value
Control

Participants in the combined condition improved on cognitive (elaboration, organisation and critical thinking), metacognitive, and resources management (time-management and effort regulation) strategies more than other conditions.



IN SUM

WHAT NEXT?

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