

Videolectures: Freedom for Some, Challenge for Others?

Self-regulated learning, motivation, and technical practices as predictors of students' preference for asynchronous video lectures



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THE QUESTION

Freedom for some, challenge for others?

Video lectures hand control to the learner.

We ask who is equipped to take it?

And what that means for everyone else?

What we study?

Video design

How the video is built — the player, the features, subtitles, multimedia layout.

Noetel et al., 2021

Viewing behaviour

What students do while watching — pauses, speed, rewinds, clicks, even eye-tracking.

Yoon, Lee, & Jo, 2021

The person — missing

Which student characteristics shape how they work with video, and why they'd prefer it.

This study

Self-regulated learning is that missing psychological layer. It links a student's motivation and personal features to how they behave with the video — and to what they prefer.

How do self-regulated learning, motivation, technical practices, and social interaction together predict students' preference for video lectures over face-to-face instruction?

01

METHOD

Who we asked, what we measured, and how we modelled it.

METHOD

1,858 students, seven scales

Sample

N = 1,858 kept after cleaning 2,058 collected

Age M $\approx$ 22 (range 17–67)

86.1% female

76.1% full-time

62.9% state-funded

Moscow City University, autumn 2025.

Voluntary, anonymous, informed consent.

Scale	Items	α
Self-regulated learning	15	.903
Motivation	4	.879
Comfort of conditions	3	.823
Peer interaction	4	.808
Instructor interaction	3	.656
Technical practices	5	.555

Four-point frequency scales (never – always), translated from Russian. Technical practices = playback speed, subtitles, AI summarisation.

Analysis. SEM in R with standardised predictors. Several competing models compared to see which fits the data best.

What “preference” means here

For each of 16 statements, students chose the format that does it better.

2

Better as a video lecture

1

Both formats equally good

0

Better in person — or neither

Three dimensions

Cognitive — understanding, concentration, grasping difficult topics

Social — contact, feedback, belonging, isolation

Methodical — structure, pacing, instructions, individual approach

The composite is the mean across all 16 items. Higher = stronger pull toward video.

02

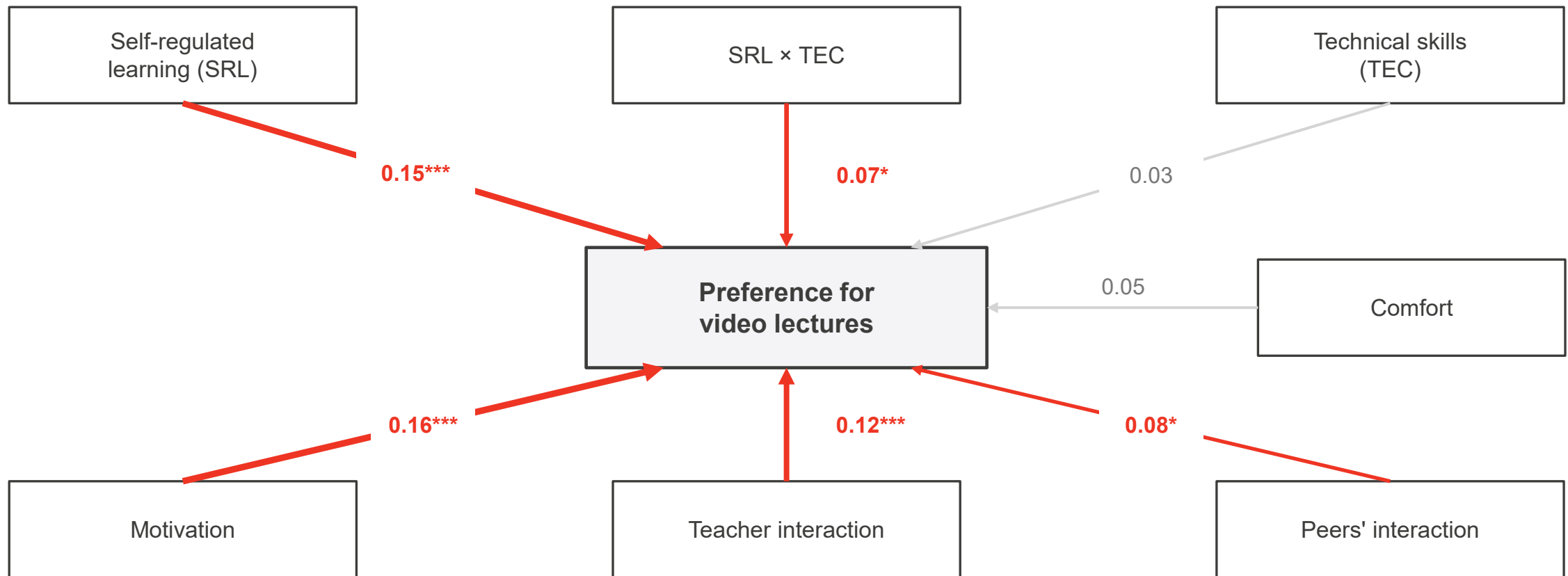
RESULTS

The final model, the interaction, and the numbers.

THE MODEL

Six predictors, one interaction

$R^2 = .215$



Red = significant (a real connection). Grey = not significant. Technical skills and comfort do nothing alone — but SRL × technical skills is significant: technical skills augment the SRL effect (next slide).

Technical skills augment self-regulation

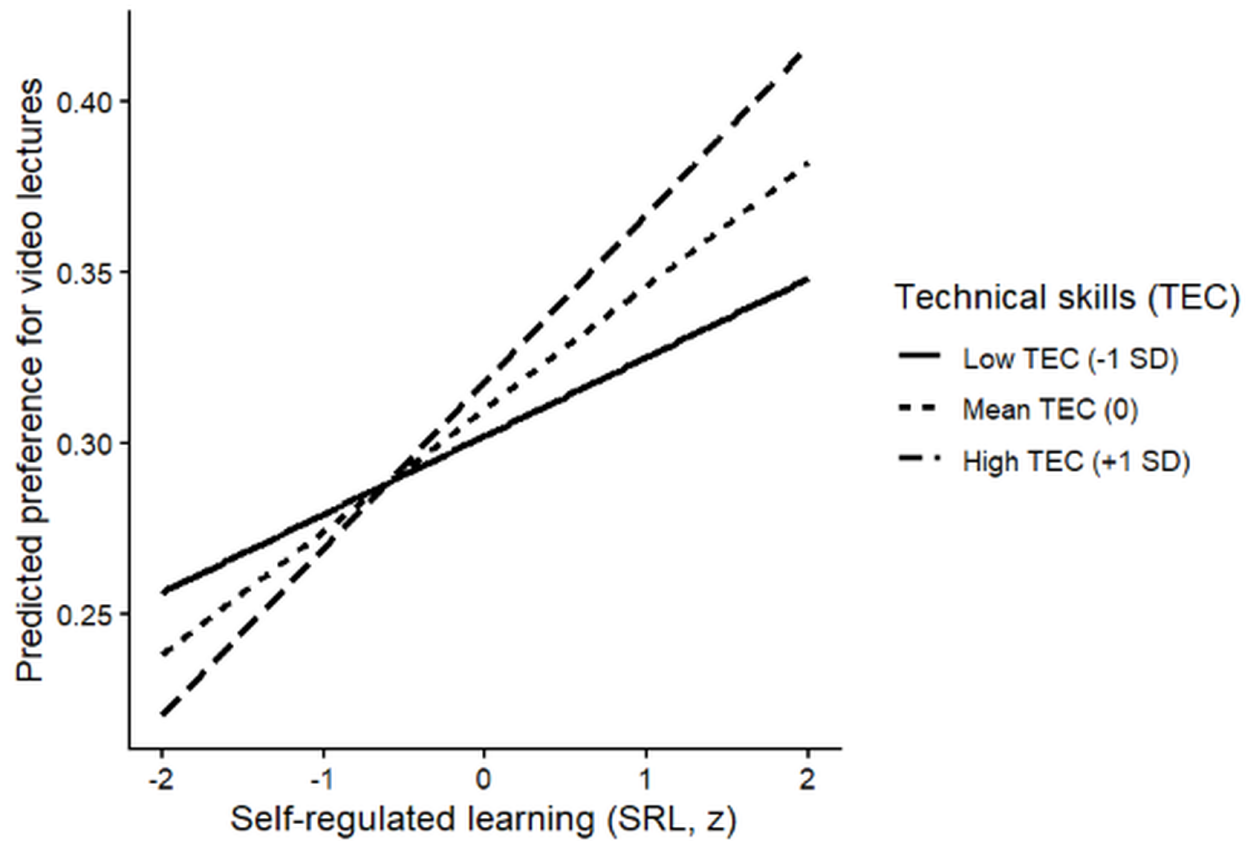


Figure 2. Predicted preference for video lectures across SRL, by level of technical skills.

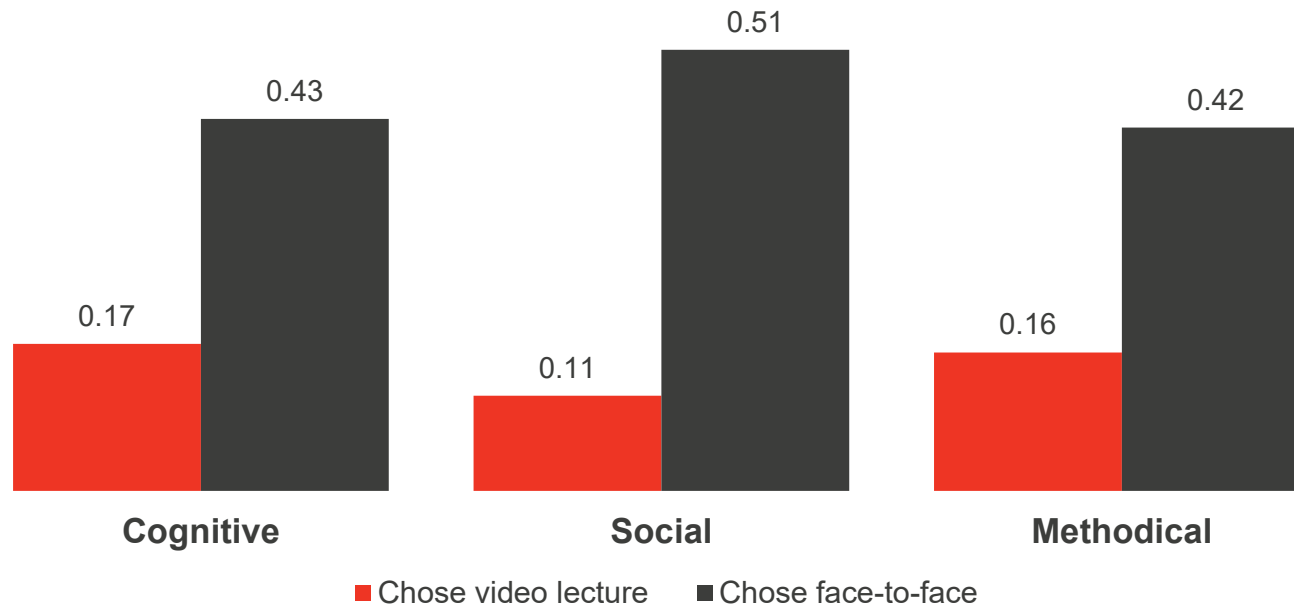
**The higher the technical skills,
the steeper the slope**

As self-regulation rises, so does preference for video — for independent, autonomous work with the material. And technical skills augment that link. With higher technical skills the line climbs faster: the same self-regulation buys a stronger preference.

In plain terms

Self-regulation is the driver; technical skill is the car.

Almost nobody prefers video



Even the strongest self-regulators, with the best technical skills, still choose face-to-face.

The social gap is widest — and that feels intuitive. Students want a real person in the room.

But the surprise is the rest. Video can be clearer cognitively: you pause, rewind, think and more structured methodically than a live, spontaneous lecture.

Students prefer face-to-face anyway. On every dimension.

03

SO WHAT?

What it means, who it favours, and what the design cannot settle.

Tolerance, not preference

Students still mostly prefer the classroom. So, when self-regulation and motivation “predict video preference,” they predict who **tolerates** video better and not who wants it more.

- What builds that tolerance is internal, not external. It is the student's motivation and understanding why they watch, and their ability to organise their own work
- Not the video's features. Not the viewing conditions; comfort had almost no effect
- Contact with the teachers and the classmates matters, through the online channels the format allows
- And technical skills augment self-regulation as moderator

Who gets the freedom?

If video suits the students who already self-regulate and already operate the tools, then expanding asynchronous delivery distributes its benefit unevenly.

Freedom

High SRL, high technical skill. Video is control: pace, review, replay. The strategy has an instrument to work with.

Challenge

Low SRL, low technical skill. The same format removes external structure and returns nothing usable in its place.

The gap

Both groups get identical provision. The format converts an existing difference in preparation into a difference in experience.

Same provision, different returns — the equity question this study raises and cannot answer yet.

What a university can change

01 Train self-regulation

Goal-setting, monitoring, planning the viewing — taught, not assumed. Giving a recording is not giving the skill to learn from it.

02 Teach the tools

Playback control, subtitles, AI summaries as skills to build. The tools only pay off for students who can use them.

03 Keep people in the picture

Contact with teachers and classmates mattered in our data. Online does not have to mean alone.

04 Build support into the video

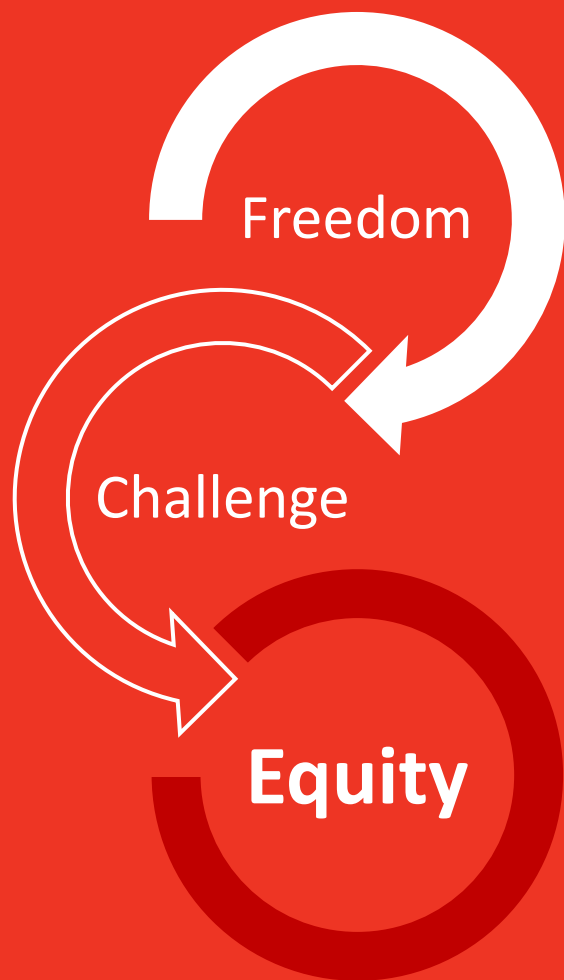
Author videos differently, not just recorded lectures: signpost key take-aways, direct attention to important points, and add self-checks so students stay engaged. External structure inside the video.

LIMITATIONS

What this design cannot tell us

- Cross-sectional self-report. Students who prefer video may report more strategy use because they prefer it, and the model cannot separate that from the reverse.
- One institution, 86% female, heavily pedagogical and arts faculties. A Moscow City University sample is not a claim about higher education.
- The moderator's $\alpha = .555$. Reported, and it cuts toward a conservative estimate rather than a false positive.
- Preference is not achievement. We measured what students say they would rather have, not what they learn from.
- $R^2 = .215$ leaves most of the variance with something we did not measure — discipline, workload, and the quality of the specific lectures are all candidates.

BACK TO THE QUESTION



Freedom for some:

the students who already regulate their learning and can operate the tools.

Challenge for others:

for most of students! Face-to-face wins every dimension.

The format does not distribute its freedom evenly.

Thank you

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FOR QUESTIONS

BACKUP

Model comparison · full measures · full sample · null results and mediation

Choosing fit over variance

Model	df	CFI	TLI	RMSEA	SRMR	R ²	ΔBIC
Base (saturated)	0	1.000	1.000	.000	.000	.210	74.40
SRL × Technical skills	6	.992	.961	.067	.031	.215	70.80
SRL × Motivation	6	.945	.741	.179	.098	.278	21.20
SRL × Comfort	6	.929	.671	.204	.105	.296	0.00
SRL × Tech + Comfort	12	.918	.761	.156	.099	.300	6.29
SRL × Tech + Comfort + Motiv.	18	.900	.766	.143	.121	.305	11.80

Read the last two columns against each other. SRL × Comfort has the best BIC and explains more variance ($R^2 = .296$), and we rejected it: TLI = .671 and RMSEA = .204 indicate the structure is misspecified. BIC rewards a model for fitting the covariances it does model, and stays quiet about the ones it gets wrong. We chose fit and parsimony over variance explained. Retained model: $\chi^2(6) = 56.72$, $p < .001$.

Measures in full

Scale	Items	α	Example item
Self-regulated learning	15	.903	"I pause the video to take notes and think the material through."
Motivation	4	.879	"I link lecture topics to my future professional work."
Comfort of conditions	3	.823	"I have comfortable conditions for watching video lectures."
Peer interaction	4	.808	"I explain difficult ideas to other students."
Instructor interaction	3	.656	"I can get feedback from the instructor."
Technical practices	5	.555	"I use AI to summarise the video."

Four-point frequency scale (never – always); items translated from Russian. Technical practices had the lowest reliability of the set — the scale mixes AI use, subtitles, and playback speed, which students do not do as a bundle.

Sample in full

Characteristic	Distribution
Age	M = 22.38, SD = 5.83 (range 17–67)
Gender	86.1% female · 13.9% male
Degree level	78.3% Bachelor's · 21.0% Master's · 0.7% Specialist
Mode of study	76.1% full-time · 14.5% blended · 9.4% distance
Funding basis	62.9% state-funded · 28.8% self-funded · 8.2% federal
Year of study	29.2% (Y1) · 29.2% (Y2) · 18.8% (Y3) · 17.0% (Y4) · 5.8% (Y5)
Largest faculties	Psychology & Rehabilitation (28.1%) · Pedagogy & Educational Psychology (21.9%) · Culture & Arts (21.4%)
Region	52.4% Moscow · 22.1% Moscow region · 21.2% other
Academic debt	92.8% none

Online survey, Moscow City University, autumn 2025. 2,058 responses collected; 1,858 retained after removing incomplete, duplicate, and erroneous profiles. Voluntary, anonymous, informed consent. Ethics approval 23 March 2026.

Null results and the mediation test

Technical skills

$\beta = .032$ $p = .245$

Knowing how to change speed, add subtitles, or prompt an AI does not, on its own, make a student prefer video.

Comfort of conditions

$\beta = .051$ $p = .080$

A quiet room, a working laptop, no technical trouble — necessary, and not sufficient. Marginal, and we treat it as null.

Comfort was also tested as a mediator between SRL and preference. The indirect effect was not significant ($p = .144$) and the direct SRL effect held — no evidence of mediation.