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The Dopamine Loop

Infographic: how mobile apps hack the pupil's brain - a 6-stage model

WHAT IS THE DOPAMINE LOOP?

Dopamine is the brain's reward chemical - it is released when we anticipate or obtain something we want. App designers deliberately engineer mechanisms that trigger repeated dopamine releases. This works in exactly the same way as a slot machine. The result: the brain constantly demands the next "hit", which can lead to behavioural addiction.

THE MECHANISM - 6 STAGES OF THE DOPAMINE LOOP

1 TRIGGER
You open TikTok or Instagram and start scrolling through the feed.

2 UNCERTAINTY
You never know what the next video will be. Will it be funny? Exciting? Shocking?

3 ANTICIPATION
The brain releases dopamine BEFORE the reward - the anticipation itself is addictive!

4 REWARD (or not)
You hit a great video. Or you don't - and you keep scrolling. Exactly like a slot machine.

5 CRAVING THE NEXT HIT
The brain immediately wants more. "Just one more video" becomes impossible to resist.

6 DEPENDENCY
You go round and round. Hard to stop, even when you want to. FOMO replaces free will.

COMPARISON - TikTok vs. Slot Machine

Mechanism	TikTok / Instagram	Slot Machine
Random reward	The next video may be great or dull - you never know	You may win or lose - the machine decides randomly
"Just one more" effect	You scroll to the next video automatically	You insert another coin immediately
Colourful stimulation	Animations, transitions, fast-paced music	Lights, sounds, flashing colours

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Mechanism	TikTok / Instagram	Slot Machine
No off switch	The feed is infinite - there is no end	The machine never runs out
Personalised trap	The algorithm shows you what you already like	The machine remembers your favourite combinations

WHAT CAN TEACHERS DO WITH THIS KNOWLEDGE?

- Explain the mechanism to pupils BEFORE you ban phone use - understanding is more effective than prohibition alone.
- Activity: "How many times do I check my phone in one hour?" - pupils are often surprised by their own results.
- Introduce "screen-free time" as an experiment (Resource 06), not as a punishment.
- FOMO (Fear of Missing Out) can be turned into JOMO (Joy of Missing Out) - but only through direct personal experience.
- Talk about app designers as "brain hackers" - pupils enjoy feeling smarter than the system.

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