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METEORAIT FOR EDUCATORS



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**METEORAIT
FOR EDUCATORS**

Pitesti, 2026

ISBN [*to follow*]

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INTRODUCTION

If you are a teacher and have felt in the last 1-2 years that students' assignments are perhaps too perfect, that homework grades don't match what they can do in class, that you struggle to detect who has copied and who hasn't, and that anti-plagiarism systems can't find anything because the text is "original" - then this guide is for you.

It's not for principals who want to "implement AI in school". It's not for the Ministry of Education that writes strategies. It's not for parents who want to understand "what's happening to their children". It's for you, the Teacher who maybe enters tomorrow at 8:00 in a class with 25-30 students, and each one has a device in their pocket capable of generating a perfect homework in 30 seconds.

You don't have to be a computer science teacher. You don't have to understand how ChatGPT, Gemini, Claude, or any other AI works. You just have to recognize the problem: you can no longer assess what the student knows if everything you assess is done at home, unsupervised, with unlimited access to AI.

WHY NOW? Between January 2023 (the launch of ChatGPT) and January 2026, something unprecedented in the history of education happened: for the first time, the average student has free access to a tool that can do all their intellectual work, instantly, at an expert level. It's not Google (which gives you raw information that you have to process). It's not Wikipedia (which gives you knowledge that you have to synthesize). It's a tool that synthesizes for you, writes for you, solves for you, thinks for you - **if you let it.**

The education system hasn't adapted. We still assign homework, we still grade final "products". We still assume that the student turns in a perfect paper because they learned something. But the reality is that most students have discovered that they can finish in 5 minutes what would take them 2 hours, without getting caught, without being punished, with the same grade or even a higher grade.

It's not their fault. It's rational economics. Why wait 2 hours when you can finish in 5 minutes? Why risk making mistakes when AI guarantees your accuracy? Why struggle when the system doesn't differentiate between your work and the machine's work?

The answer is not to ban AI. You can't. It's on their phone, it's free, it's a click away. **The answer is to change What and how do you measure.**

WHAT YOU WILL FIND IN THIS GUIDE

Part I - Diagnosis: How to recognize **cognitive atrophy** in students (FCPT - False Cognitive Power Transfer) and how to check if you yourself have become **dependent on AI** for tasks you used to do yourself.

Part II - The Weapon: Concrete protocols, logically tested, to make AI irrelevant or counter-productive in assessment. Not pedagogical philosophy, but practical tools: how to design a task that cannot be solved by AI, how to check in 30 seconds if the student understands what he wrote, how to evaluate the process (not just the product), how to respond when parents complain or when the principal pressures you.

Part III - Toolkit: Checklists, templates, email suggestions, evaluation grids, classroom posters - everything you can use directly, without major changes, from tomorrow.

Part IV - Epilogue: About limits, about giving in, about what you can control or you can't, about why it's worth it even if it's hard.

WHAT YOU WILL NOT FIND IN THIS GUIDE

You won't find a magic solution that will transform the system overnight. You won't find the promise that "if you do exactly this, all students will become geniuses."

You won't find institutional validation (the ministry hasn't approved the book, the Administration doesn't officially recommend it, your colleagues will probably look at you strangely).

You won't find any optimistic 'pro-AI' approach that tells you it is the future and that you must teach students to become '*Prompt Engineers*'. You will find reality: you can't be good when use AI if you don't have foundation **without AI**. Amplification comes after competence, **not in place**. AI can increase creativity if it is used for **divergence** (brainstorming), **not convergence** (final solution).

You won't find protocols for every discipline / age or every educational system in the world. You will find universal principles applied on two broad axes (Math & Sciences and Humanities / 10-14 years and 14-18 years). If you are a music or chemistry teacher and you don't find yourself in the examples, you will have to extrapolate.

HOW TO READ THIS GUIDE

If you have limited time (and you probably do), read in this order:

1. Part I, Chapter 1 (FCPT Checklist) - 10 minutes

Quickly identify if the problem exists in your students.

2. Part II, Chapter 3.2 (Micro-verification) - 10 minutes

The most effective protocol (2-3 min out of 50 minutes of class).

3. Part III (Toolkit) - 15 minutes

The templates you need for next week.

If you have time to read everything (1-2 hours), read linearly. The guide is logically structured: from diagnosis, to solutions, to resources, to the realism of limits. If you feel like you're giving up after 2-3 weeks of application (and maybe that's normal, fatigue is human), go straight to **Chapter 3.6 (Self-Sabotage)** - the recovery protocol.

If you want to see the AI era through the eyes of Generation Z and Alpha, read **METEORAIT FOR TEENS**. If you want to understand the impact of AI on human society, read **METEORAIT**.

METEORAIT CONCEPTS IN BRIEF

Terms used in this guide:

- 1. FCPT (False Cognitive Power Transfer):** The student's **illusion** that he is smart because the machine gave him a smart answer. It is the "speed intoxication" of the brain.
- 2. Tb ("Biological Thinking Time"):** The time it takes for neurons to make connections. It's slow, cumbersome, and "sweaty." The only one that produces real learning.
- 3. Tg ("Generated Thinking Time"):** The time it takes the AI to conceive the result. It is almost instantaneous.
- 4. L1 (Passenger):** The student who uses AI as a hammock. Risks cognitive atrophy and irrelevance within 24 months. Measured.
- 5. L2 (Operator):** The student who uses AI for efficiency but remains dependent on it. Does the same thing, but faster.
- 6. L3 (Architect):** The one who understands the process. Uses AI as an exoskeleton (empowers it), but can operate without it (has control).
- 7. Useful Friction:** The method by which the teacher intentionally introduces difficulties to force the student's brain to "work" ($T_b > 0$).

THE LAST THING BEFORE YOU START

This guide won't make you popular, it won't completely protect you from complaints, from pressure, from fatigue. But it will make you honest. And honesty, in a system that **pretends** that AI doesn't exist or that it "will fix itself", is already a form of resistance.

You don't have to apply everything. You don't have to be perfect. You just have to be a little more aware tomorrow than you are today about what you're measuring when you give a grade. And if out of the 25-30 students you have in your class, even 5-10 end up being able to think without "crutches", you've done more than the system expects of you.

This guide was written by an engineer – you will probably feel this distinct style as you go through the book (engineering thinking is not just an accumulation of diverse knowledge, it is a **structured method** of processing reality through the filters of logic, efficiency and systems).

Recommend that your students read **"METEORAIT FOR TEENS"** - the operational adaptation of the theoretical corpus "Cognitive Divergence Theory" (CDT) for the demographic segment most at risk of mental atrophy: generations Z and Alpha. METEORAIT FOR TEENS offers them a set of technical and behavioral protocols (e.g.: "Controlled Latency", "5-Minute Wall", "Reverse Engineering") designed to reintroduce deliberate effort into the learning process. The ultimate goal is to move from the Cartesian paradigm of processing ("I think, therefore I am") to the interrogative paradigm of the new era: **"Rogo, Ergo Emergo"** ("I ask, therefore I become").

***"METEORAIT FOR EDUCATORS** is a self-defense manual for teachers. While universities write philosophical treatises, this book tells you what to do at school tomorrow. From the point of view of neuroscience and modern pedagogy, it is very correct." - AI Gemini Advanced review (Google AI), January 2026*

PART I - DIAGNOSTICS

CHAPTER 1: How to recognize FCPT in the classroom

*(False Transfer of Cognitive Power - when the student **thinks** he knows, but **he only witnessed**)*

1.1 OBSERVATIONAL CHECKLIST

Check the behaviors you frequently see in a student. **More than 7-8 ticks = high risk of FCPT.**

A - Fluency without substance

- Responds quickly and fluently to general questions, but gets stuck on "Why?"
- The written work is stylistically impeccable, but the student cannot explain his/her own arguments
- The vocabulary from the homework never appears in spontaneous conversations
- When you interrupt him with a side question, he completely loses the thread.

B - Dependence on external support

- Can't start a task without "checking something quickly" (euphemism for AI / Google)
- Always asks for "an example" before trying it himself
- On tests (without internet access / AI), performance drops dramatically compared to homework
- Visible panic when phone is unavailable

C - Lack of metacognition

- Doesn't know how to say "I'm not sure" - either keeps quiet or avoids the answer
- Can't estimate how long a task will take ("5 minutes" for everything)
- Doesn't identify errors in his own work when you show it to him after 2 days
- When something is wrong, he doesn't understand WHY it's wrong (even if you show him)

D - Asymmetric performance

- Homework: 9-10 vs. Oral questions: 5-6
- Written: excellent vs. Explained aloud: confusing
- Technical: perfect vs. Conceptual: empty, without actual content

1.2 CRITICAL DIFFERENCE: "Doesn't know" vs "Knows only with assistance"

The student who "DOESN'T KNOW" (yet):

- Acknowledge the gap: "I didn't get to that chapter";
- Try, make mistakes, ask for specific help;
- After explanation, he can reproduce logically;
- **PROGNOSIS:** Can recover through normal learning.

The student with FCPT (KNOWS only with assistance):

- He doesn't recognize the gap: "I know, it just doesn't come to my mind right now.";
- Don't try - ask directly for the answer or "a hint ";
- After the explanation, reproduce mechanically or not at all;
- **PROGNOSIS:** Progressive atrophy if the pattern continues.

THE DECISIVE TEST ("The 48-Hour Gap "):

- The student submits an excellent paper;
- After two days, you ask him to explain ORALLY what he wrote;
- **FCPT confirmed:** Can't. Says "I forgot" or "I need to review what I wrote in the paper."

1.3 THREE CONCRETE EXAMPLES

CASE 1: MARIA (L1 - Passenger)

Observed behavior:

- Perfect essays, textbook structure, zero grammatical errors
- When questioned: "How did you come to that conclusion?" → Silence. Stares into space.
- When asking for rewording: repeat the exact same phrases as in the essay
- On exams: write 60% of the usual length, lower-level language.

Diagnostic:

- Severe FCPT
- AI does 80-90% of the work, or maybe even 100%
- Maria reads, copies, possibly modifies a few words, sends
- Zero internalization.

Distinguishing marks:

- "The words are not hers" - you feel this when you read
- He has no personal opinions about what he "wrote"
- If you ask "What would you like to add?", he doesn't know.

CASE 2: ANDREI (L2 - Operator)

Observed behavior:

- Math homework: all exercises correct, steps clearly explained
- At the blackboard (similar problem): knows the algorithm, but hesitates on the details
- When you give him a new version: "I didn't do that"
- It can explain WHAT it does, not WHY it works

Diagnostic:

- Moderate FCPT
- AI is a "copilot" that Andrei uses to check
- Andrei understands 60-70%, but can't go further on his own

Distinguishing marks:

- Apparent but fragile competence
- When AI makes a mistake, Andrei doesn't detect it
- For non-standard issues: blocked

CASE 3: ANDRA (L3 - Architect)

Observed behavior:

- The work has deletions, rewritten sentences, imperfect structure
- When questioned: explains in own words, sometimes makes mistakes, corrects herself
- When you ask her "Did AI help you?": "Yes, I asked for 3 introduction options, chose one and rewrote it"
- On exams: similar performance to homework ($\pm 10\%$)

Diagnostic:

- ZERO FCPT
- AI is a tool, not an author
- Elena controls the process

Distinguishing marks:

- Can he say what he rejected from what the AI gave him and why?
- Has stylistic preferences ("I don't like the way that sounds")
- Can operate without AI, just slower

CHAPTER 2: Self-assessment for the Teacher

(Are you an L3 in your field yourself?)

2.1 WHY IT MATTERS

The Inconvenient Reality: Teachers are using AI for lesson plans, assessments, feedback. If YOU have FCPT, you can't detect FCPT in students.

It's not your fault. You're under pressure, tired, overworked. AI seems like a savior.

The problem: If you become dependent on AI for basic tasks, students sense it. Your epistemic authority diminishes.

2.2 QUICK TEST

(10 questions - answer honestly, it's just a self-assessment)

A - Assistance dependency

1. Lesson plans:

- A: I write them from scratch (even if it takes me time)
- B: I ask AI to generate, then significantly modify
- C: I ask AI to generate, use directly or modify cosmetically

2. Assessments (tests/homework):

- A: I create them myself, thinking about what I want to test
- B: AI generates, I select/edit the questions
- C: AI generates, I just check that I'm on topic

3. Feedback for students:

- A: I write personally, based on what I have observed
- B: AI suggests, I customize
- C: AI writes, I just adjust the tone

B - Ability to operate manually

4. If AI fails for a week, I can:

- A: I'm working normally (slower, but ok)
- B: I am functioning, but I feel a lot of pressure
- C: I'm panicking - I've lost the "extension" of my mind

5. The last time I read a book/article about my field (without AI):

- A: In the last 2 months
- B: In the last 6 months
- C: I don't remember anymore

C - Metacognition

6. When students ask questions I don't expect:

- A: I can improvise a reasonable answer
- B: I say "I'm looking and I'll get back to you tomorrow" (and I really am looking)
- C: Distract or avoid the question

7. Can I explain the material without a PowerPoint presentation / note?

- A: Yes, I can do an impromptu lesson
- B: Partially - general structure yes, details no
- C: No - I need constant visual support

D - Depth vs Coverage

8. When I prepare a new lesson:

- A: I deeply understand over 80% of the material
- B: I understand enough to teach, but I can't answer advanced questions
- C: I rely on materials already made

9. Compared to 3 years ago, I feel:

- A: More competent in my field
- B: Equally competent
- C: Rusty - no longer practical deep

E - Relationship with "error"

10. When I make a mistake in class:

- A: I admit it, I explain it correctly.
- B: I subtly avoid it or minimize it
- C: I don't notice it until a student points it out.

2.3 INTERPRETATION

Most answers A: You are L3. You can detect and correct FCPT in students.

Most answers B: You are L2. You are functioning. You can detect FCPT in students if you are vigilant.

Most answers C: You have FCPT. You need to recover BEFORE you can help students. There is no shame. It is reality.

2.4 SELF-RECOVERY PROTOCOL (if you have FCPT)

Week 1-2: Partial Detox

1. 1 lesson/week FULLY prepared without AI
2. Time it: how long does it take you?
3. Notice: where are you getting stuck?

Week 3-4: Re-training

1. Choose 1 subject you "know" but haven't taught yourself recently
2. Explain it to a colleague (or register)
3. Identify gaps - fill them manually

Months 2-3: Stabilization

1. 50% of plans without AI, 50% with AI
2. Compare quality - where does AI really help you vs. where does it make you lazy?
3. Redo what seems incomplete or insufficient to you.

From month 4+: Conscious symbiosis with AI

1. You use AI, but with total control
2. You can tell exactly what the AI did and what you did
3. You can operate without AI, if necessary

PART II: WEAPONS

CHAPTER 3: What you can do

3.1 Anti-AI theme design

(“Assignment Engineering” - Algorithm Pitfalls)

3.1.1 BASIC PRINCIPLE

Most teachers try to detect cheating AFTER the assignment is handed in. They check with anti-plagiarism software, look for strange patterns, ask control questions. All of this wastes energy and generates conflict.

There is a more effective way: the theme itself can make AI useless or even counterproductive. **You don't ban AI. You make it irrelevant.**

3.1.2 METHOD 1: Specific local context

The universal concept:

The AI is trained on global, abstract, generic data. It knows nothing about the student's immediate reality: the neighborhood they live in, the corner store, the bus they take, the gym teacher who swears in the local dialect. When you insert **local details** into the requirement, the AI can generate text, but it will be obviously empty because it has no access to the personalized experience.

Application to Humanities - Language/Literature:

Vulnerable classic requirement: "Compare the main character in novel X with a contemporary public figure."

Anti-AI requirement: "Compare the main character in novel X with *[a person from your immediate environment: the saleswoman at the store, the bus driver you take every day, the security guard at school]*. Describe a situation in which the character would react similarly or differently to how this person reacts when *[a concrete observable situation]*."

Age differences:

If the student is 10-14 years old, ask for a comparison with someone they see daily and about whom they can say simple, visually

observable things: "how they dress", "what tone they use when they speak", "how they react when they are in a hurry".

If the student is 14-18 years old, ask for a comparison with someone whose motivations you can intuit: "why do you think this person chose this job", "what regrets do you think they have", "what would it have been like if they were in a different context".

Why it works:

AI can invent a generic person. The student who goes to the corner store actually knows the saleswoman: he knows that the lady is about 50 years old, smokes in front of the store, acts bossy when there is someone present but is gentle with children. A student who writes about "a polite and professional saleswoman" - has betrayed himself.

Application to Math & Sciences - Physics:

The classic vulnerable requirement: "Calculate the velocity of an object falling freely from 100m."

Anti-AI requirement: "Measure the height of the apartment building you live in [*or the school, or the tallest tree in the yard*] using a method of your choice (and explain the method). Calculate how long it would take for an object to fall from one floor (different variations for students) to the ground. Then test it experimentally with a safe object (ball, empty plastic bottle) - time it or film it. Compare the real time with the theoretical calculation. Explain the difference."

Age differences:

If the student is 10-14 years old, they accept simple measurement methods (counting floors \times 3 meters, comparing with the height of someone they know). The experiment can be done with the assistance of an adult.

If the student is 14-18 years old, ask for more sophisticated measurement methods (trigonometry, shadow, smartphone apps) and deeper explanations about the cause of the difference (air resistance, the shape of the object, even the Magnus effect - if the object rotates).

Why it works:

The AI can do the theoretical calculation perfectly. But it can't measure the real block, it can't throw the ball, it can't explain why real time is different based on the concrete experiment. The student has to go out into reality.

Application to Humanities - History:

The classic, vulnerable requirement: "Analyze the impact of the French Revolution on Europe."

Anti-AI requirement: "Interview a member of your family (parent, grandparent, uncle) about a historical event they experienced firsthand. Describe 3 concrete things that that person values in life (based on real conversation, not assumptions). Then analyze: if they had lived during the French Revolution, would they have agreed with the revolutionary ideas? Why yes or why not?"

Age differences:

If the student is 10-14 years old, the interview can be guided by simple questions that you can suggest: "What did you like most when you were a child?", "What makes you happy?", "What do you think is unfair in the world?". The historical analysis can be simple: would they have been on the side of the king or the revolutionaries?

If the student is 14-18 years old, the student constructs his own interview questions and makes a more nuanced analysis: what he would have supported in different phases of the Revolution (1789 vs 1793), what contradictions he would have had between values and context, how his opinion would have evolved over time.

Why it works:

The student must access real biographical memory about someone they know. The AI can invent a generic grandfather who "values work and family", but the student knows that his grandfather doesn't tolerate trickery, and says "*Back in my day...*" The authenticity is palpable.

3.1.3 METHOD 2: Clichés (“Forbidden Words List”)

The universal concept:

The AI obsessively uses certain formulas, logical connectors, sentence patterns. They are visible to a trained eye, like a “fingerprint”. Instead of detecting them AFTER, you ban them BEFORE. At the beginning of the year, you clearly announce: "List of banned words/phrases. If they appear in your essay, your grade will automatically drop. No discussion."

Standard list (you can also complete it over time):

Generic connectors that AI often uses: "In conclusion", "On the one hand / on the other hand", "First of all, secondly", "It is important

to note that", "Thus" (at the beginning of the sentence), "Indeed", "Of course".

Grandiose formulations without substance: "Throughout history", "Since ancient times", "In contemporary society", "In today's modern world".

AI's favorite pleonasms: "different points of view", "varied perspectives", "multiple approaches".

Age differences:

For 10-14 years: Shorter list (7-10 expressions), with simple explanations: "If you write 'in conclusion', it means you haven't thought about how to end the text. Think about how you would end a story told to a friend." "Soft" version: ask for reformulation, don't penalize.

For 14-18 years: Complete list (10-15 expressions). "Hard" variant: automatic penalty of -1 or -2 points per occurrence. If the student protests "but I really think so", you ask: "Then explain WHY you chose exactly this formula, not another one. If you can't explain, it means it's not yours."

Psychological effect:

The student using AI will receive the text back full of these formulas. He has two options: rewrite everything manually (in which case he LEARNS) or try to replace them mechanically with synonyms (in which case the text becomes "weird" - and it shows). The student who writes on his own naturally avoids them because he does not think in pre-made formulas, but in his own ideas.

3.1.4 METHOD 3: Layered Requirements ("The Onion Method ")

The universal concept:

AI is excellent at simple, clear, delimited tasks. It succumbs to layered complexity, where level 2 depends on personal interpretation of level 1, and level 3 requires a vulnerable personal position. Build the theme in three layers: informational (AI can do this), interpretive (AI can do it generically), personal-vulnerable (AI can't, because it has no biographical experience).

Application to Math & Sciences - Mathematics:

Layer 1 - Informational: "Summarize the Pythagorean theorem in no more than 50 words."

Layer 2 - Interpretive: "Find a practical situation in your home where the Pythagorean theorem helps you calculate something you can't measure directly. Explain the calculation."

Layer 3 - Personal-Vulnerable: "Have you tried the calculation in practice? If so, what was the difference between the calculation and the actual measurement? If not, why didn't you try (what stopped you or what were you too lazy to do)?"

Age differences:

For ages 10-14: Layer 3 can be simpler: "Have you ever thought about this theorem when you were looking at something around the house? What did you think about?" Or: "If you had to explain this theorem to your younger sibling, what object in the room would you use as an example?"

For ages 14-18: Layer 3 requires real vulnerability: "Describe a situation in which you needed a mathematical calculation in real life and either you didn't know how to do it, or you did it wrong, or you were lazy. What happened?" Or even: "Why do you think this theory seems useless to you? (If you don't, explain when you think you will use it in reality.)"

Why it works:

Layer 1: AI writes perfectly. The student feels "safe". **Layer 2:** AI writes reasonably, but generically. The student can accept or think for themselves. **Layer 3:** Everything is decided here. AI can invent a "situation from the student's life", but it will be empty of real emotion, sensory details, human contradictions. The student who writes about "I applied and it worked perfectly" (without any problems, no surprises) - red flag. The student who writes "I got stuck on step 3 because I didn't understand what that formula was for" or "I didn't have a tape measure and couldn't measure" - is real.

Application to Humanities - History:

Layer 1 - Informational: "Summarize in 80 words the causes of World War I."

Layer 2 - Interpretive: "Identify 2 causes that the teacher did NOT mention in class or that the textbook treats superficially. Explain why you think they are important."

Layer 3 - Personal-Vulnerable: "If you were an 18-year-old in 1914, in one of the countries involved, would you have volunteered? Explain honestly (not what you 'should' feel, but what you think you

would have actually felt). Or: if you are not sure, explain why you cannot decide."

Age differences:

For ages 10-14: Layer 3 can be more concrete and less emotional: "If it were you in 1914, what would you have done when your neighbors went to war? Would you have gone with them or stayed home? Why?" Accept simple answers, but ask for honesty.

For ages 14-18: Layer 3 requires deeper introspection: "Analyze what factors in your current identity (family, values, fears) would have influenced the decision. If your answer is 'it depends on the context,' describe 2 different contexts in which you would have decided differently." Or: "Are you the type of person who makes decisions based on principles or based on emotion at the time? How do you think that would have manifested itself in 1914?"

Note for both disciplines: Layer 3 does not require "success" or "morally correct response". It requires **genuine vulnerability**. "I'm not sure what I would have done" or "I would have probably done X out of fear, not courage" or "Honestly, I didn't try because I was lazy" - all are valid answers. **The AI doesn't know how to be vulnerable.** It will always write the "heroic" or "correct" answer.

3.1.5 THE PROGRESSION TOWARDS AUTONOMY Ramp ")

You cannot transform a "Passenger" (L1) into an "Architect" (L3) overnight. The effort must be measured so as not to generate abandon (panic). This progression must be done over the course of a semester:

Phase 1: Critical Consumption (L1 → L2) – “Error Detective”

Task: The student asks the AI to solve the assignment, but its task is to find 3 weak points or an error in the answer.

Purpose: Moving from "blind acceptance" to "active verification."

Phase 2: Human structure + AI filler (L2) – “The Skeleton”

Task: The student writes the structure (content/logical steps) by hand and asks the AI to fill in the sections. At the end, they must justify why they chose that structure.

Goal: Regain control over the architecture of thought.

Phase 3: Sovereign Symbiosis (L3) – “The Exoskeleton”

Task: The student does all the work manually, then uses the AI **ONLY** as a cognitive **partner** (“What did I miss?”, “Contradict me”).

Purpose: AI becomes a refinement tool, not a production one.

Tip: Record **progress**, not just the result. A student who moved up from Phase 1 to Phase 2 learned more than one who got stuck in AI perfection at Phase 1.

3.2: MICRO-VERIFICATION (30 second check)

3.2.1 REALITY

A teacher with 25 students and 50 minutes of class time cannot conduct 10-minute interviews with each student to check if they have FCPT. The math is simple: 25 students × 10 minutes = 250 minutes = 5 hours. Impossible.

Most anti-FCPT verification systems fail because they require time that teachers don't have. The result: teachers give up on verification, students feel there are no consequences, **the atrophy continues undetected.**

The solution is not to ask the teacher for more time, but to change the economy of checking. Instead of checking everyone in depth, **check a few in public.** The rest of the class becomes a witness. **The effect is** not individual, but **systemic.** *Note: for extremely shy students, Micro-checking can be done at the teacher's desk, while the rest of the class is working, so as not to block them emotionally.*

3.2.2 BASIC MECHANICS

Every 2-3 classes, you choose **2-3 students.** You don't announce in advance and you don't follow a pattern. Each student gets **a single question**, related to the topic they taught. You don't ask for a summary. You don't ask for an explanation of the entire topic. You ask for a **micro detail**, a decision point, a specific "why".

Timer: **30 seconds max per student.** If the student answers in 10-15 seconds, that's great. If they stutter for 30 seconds and get nowhere, stop. Don't give public feedback at that point. Just: "Okay, thanks." Next. Total time spent: **3-4 minutes out of 50.**

3.2.3 TYPES OF QUESTIONS - MATH & SCIENCES

Principle for mathematics/physics/chemistry/computer science:

You don't ask "What is formula X?" or "What is theorem Y?" The AI writes that perfectly and the student memorizes it mechanically.

Instead, you ask about **the decision process** or a **point of friction** that only someone who has thought through the problem could see.

Example 1 - Mathematics (equations of degree 2):

The topic was: "Solve the system of equations: $2x+3y=12$ and $x-y=1$ ".

The classic (weak) question: "How much is x ?"

Student: " $x=3$ " (read from homework, memorized).

Micro-verification question (strong): "Why did you choose the substitution method and not the reduction method? Or vice-versa, if you used reduction, why not substitution?"

Why it works:

The student who thought through the problem knows: "I tried reduction, but it seemed more complicated with the coefficients, so I switched to substitution." Or: "I used reduction because x had a coefficient of 1 in the second equation, it was simpler." The answer has **friction** - it shows where he thought, where he compared options. Student with FCPT: "I... I used what he gave me..." (red flag) or "I used substitution because it's easier" (generic, without specific details).

Example 2 - Physics (free fall):

The topic was: "Calculate the time it takes for an object to fall from a height of 50m."

Micro-check question: "Why did you ignore air resistance in your calculation? Or, if you mentioned it, why did you consider it negligible?"

For 10-14 years old: The question can be simpler: "When you threw the ball in the schoolyard, did it fall exactly at the time you calculated or was it different? If it was different, why do you think?"

For 14-18 years old: The question can be more technical: "If you had taken air resistance into account, what parameters would you have needed to know about the object? And how would you have measured/estimated the coefficient of resistance?"

Why it works:

The student who did the experiment knows: "It was slower, I think because of the wind" or "I couldn't time it exactly." The answer has **texture** - sensory details, improvisation.

Student with FCPT: "It was exactly the calculated time" (impossible in reality) or "I haven't thrown yet, but I will" (avoidance).

Example 3 - Computer Science (code):

The assignment was: "Write a program that sorts a list of numbers."

Micro-verification question: "If you used the built -in function, why did you choose it instead of writing the algorithm manually?"

For 10-14 years old: "When you first ran the program, did it work or did you have an error? If you had an error, what was it?"

For 14-18 years old: "What is the complexity of the algorithm you chose and why does this matter for a list of 10 elements versus a list of 10,000?"

Why it works:

The student who wrote the code knows: "I had an error on line 7, I forgot to close the parenthesis" or "I used *bubble sort* because the list was small, it didn't make sense to complicate it." The answer has **history** - traces of programming mistakes, of compromise.

Student with FCPT: "I chose *bubble sort* because it's efficient" (false, but sounds good) or "I had no errors" (red) major flag - no one writes perfect code the first time).

3.2.4 TYPES OF QUESTIONS - HUMANITIES

Principle for language/literature/history/social sciences:

You're not asking "What is the text about?" or "Who won battle X?". That's raw information that the AI delivers perfectly. Instead, you're asking about **stylistic choices, personal emotions, or connections that aren't in the text.**

Example 1 - Language/Literature (essay about a character):

The topic was: "Characterize the main character in the novel."

The classic (weak) question: "What traits does the character have?"

Student: "He is brave, intelligent, loyal" (copy-paste from the assignment).

Micro-checking question (strong): "You wrote in your essay that the character is '*brave but impulsive*'. Why did you use 'but' and not 'and'? What did you want to emphasize by contrast?"

For ages 10-14: "You wrote that the character is '*brave but impulsive*'. If you had changed the order - '*impulsive but brave*' - would it have sounded different? Better or worse?"

For 14-18 years old: "You wrote '*brave but impulsive*'. Is that a conscious stylistic choice or did you put the first option that came to mind? If it is conscious, what do you want to suggest with this order?"

Why it works:

The student who wrote thoughtfully: "I put 'but' because I want to show that impulsivity is a problem, not a gain" or "Honestly, I didn't think about the difference, it just came to me." The second answer is still valid - it shows sincerity, not copy-paste.

Student with FCPT: "I used 'but' because it's grammatically correct" (evasive) or confused silence.

Example 2 - History (historical event):

The topic was: "Explain the causes of the Revolution of 1848."

Micro-verification question: "You mentioned 3 causes. Which of them do you think, if they had been absent, the revolution would not have happened? Or do you think they were all necessary?"

For 10-14 years old: "Of the 3 causes you wrote, which one surprised you the most when you read about it? Why?"

For 14-18 years old: "Beyond the causes you mentioned, do you think the revolution was inevitable or could it have been avoided? If so, by what means?"

Why it works:

The student who thought: "I think that without the economic crisis, political discontent would not have exploded so violently" or "Honestly, I don't know which is the most important, they all seem connected to me." Both show independent thinking.

The student with FCPT: "All causes are equally important" (diplomatic response without substance) or chooses one of the causes, without answering the question "Why?".

Example 3 - Native Language (argumentative composition):

The topic was: "Argue for or against the use of phones in schools."

Micro-check question: "You wrote '*On the other hand, phones are distracting*'. Have you ever had this situation - being distracted by your phone when you were supposed to be studying? What happened?"

For ages 10-14: "When you wrote the part about 'distracting phones,' did you think of something that happened to you or someone else?"

For ages 14-18: "In your argument, you didn't mention any solid counterarguments for the opposing position. Was a deliberate choice (to make you seem more convincing) or did you just not think of any?"

Why it works:

The student who wrote to himself: "Yes, last week, I looked at my phone instead of finishing my math homework" or "I thought about my classmate who always..." The answer has a **biographical subtext**.

Student with FCPT: "No, that didn't happen to me" (unconvincing when he just wrote about it) or "I generalized, it's a common phenomenon" (speaks like a book, not like a human).

3.2.5 EFFECT

The usefulness of the system doesn't actually lie just in the 3 students you check. It lies in the other 22 who **are watching and listening**.

When I see a colleague stammering for 30 seconds on a simple question, when I hear the difference between someone who answers with "the fingerprint of life" ("I had an error on line 7") and someone who answers sterily ("I used the algorithm efficiently"), **everyone's brain will recalibrate**.

The next assignment, all the students will think a little more. Not because they are scared of punishment (you didn't give any marks in public), but because they saw **the visible difference between knowing and thinking you know**.

For 10-14 years:

The effect is even stronger because students this age are extremely sensitive to the "judgment" of the group. No one wants to be "the one who doesn't know what they wrote." The fear of looking stupid in front of their peers is stronger than the fear of the grade.

For 14-18 years old:

Older students may be more cynical ("I'll manage anyway"), but they are also more reputation-conscious. A student who stutters to a simple question about their own homework - loses their "group esteem". Peer pressure thus becomes an ally.

3.2.6 TIME SAVING (L2 Teacher Realism)

Let's be honest: most teachers are not L3. They are exhausted L2 (Operators), with 5-6 classes, maybe over 150 students, 30-40 hours a week at school, teacher councils, parent meetings, bureaucracy. Any system that demands "extra dedication" will fail.

Micro-checking works **because it doesn't require extra effort**. You integrate it into the normal flow of the lesson: "Okay, you've handed in your homework. Before continue, I want to clarify a few things. Alex, you mentioned in your homework that... [question 30 sec]. Okay. Ana, you wrote that... [question 30 sec]. Okay. Paul, you used... [question 30 sec]. Perfect. Open your book to page..."

Total: 2-3 minutes. You don't even feel the interruption. But **the students do**. They feel it *in their stomachs*.

Realistic frequency:

You don't have to do this every hour. It's not even optimal - it becomes predictable. Do it **randomly**: once every 2-3 classes, sometimes 2 classes in a row, then a week off. Random = maximize productive anxiety. Everyone needs to be ready *at all times*, because they never know *when*.

The notation (or lack thereof):

You don't give grades during Micro-Checking. You just make mental notes. If a student fails 2-3 times in a row, then have a private conversation: "I noticed you get stuck when I ask you about your homework. Do you want to talk?"

It's not an accusation. **It's a concern.** And that's even stronger.

3.3: "FLIPPED CLASSROOM 2.0"

(Radical reversal - at home AI "free", at school pure assessment)

3.2.1 WHY THE CLASSIC MODEL IS NO LONGER FUNCTIONAL

The classic model: The teacher taught in the classroom, the student did homework at home, the teacher checked the homework. This cycle worked for 200 years because, at home, the student was alone with his brain, his book, and the friction necessary to learn.

Now, at home, the student is no longer alone. He is with the AI. And the AI is not like an older brother who maybe gives you a hint. It is like a private teacher who does all your homework in 2-3 minutes, if you ask him nicely. Or badly. It doesn't matter.

The brutal reality: Homework no longer measures what a student can do. It measures how well a student can formulate a prompt and how much they care about not getting caught. Almost all students take the shortcut. Not out of moral laziness, but out of rational economy: why sit for 2 hours when you can finish in 5 minutes and get the same grade?

Teachers are struggling to detect cheating, trying to invent "anti-AI" homework, asking control questions. It's an arms race that you might lose. Because AI is evolving faster than your detection methods. And because you don't have time to check 150 homework a week with the attention of an investigator.

The solution is not to fight reality. The solution is to accept reality and use it to your advantage.

3.3.2 THE NEW PARADIGM (Radical reversal)

Give up the idea that you can know what the student is doing at home. You can't. There's no point in trying anymore. Instead, **redraw** what's happening **at home** and what's happening **at school**. **HOME = Free preparation (AI is allowed, even encouraged):**

The student can use AI for whatever they want: to generate ideas, to structure, to ask for explanations, to verify information, to compare options. At home, it's the chaotic laboratory where there are no rules. AI is the brainstorming partner, the research assistant, the hypothesis generator.

Important: You are not asking the student to submit anything completely written at home. You are only asking for preparation: outlines, personal notes, questions they have asked themselves, options they have considered and rejected. Raw materials, not finished products.

AT SCHOOL = Monitored execution (zero AI, zero phone):

This is where the things that matter happen: handwriting, on-the-spot synthesis, oral explanation, real-time problem solving under observation. Everything that is assessed happens in the classroom, right in front of you, without access to any devices.

It's not a continuous exam. It's real work. The difference is that the work happens where you can see it, not in some invisible place where the AI can do 80% of the work without you knowing.

Why it works:

Because you're no longer fighting against the current. You let the AI do what it does well (generation, volume, speed) at home, where you have no control anyway. And you focus the evaluation on what the AI can't do: thinking under pressure, personal synthesis, visible cognitive friction.

Bonus: The student no longer feels like you're tricking or trapping them. The rules are clear, transparent, honest. "At home, use whatever you want. At school, just you and your brain."

3.3.3 PRACTICAL IMPLEMENTATION - MATH & SCIENCES

Example 1 - Mathematics (equations):

The classic (dead) model:

Home: Solve 10 equations.

At school: Check the solutions, move on to the new chapter.

Problem: 8 out of 10 students copied the solutions from the AI. You correct 250 equations, of which 200 are "fake".

Flipped 2.0:

HOME (Preparation - Free AI):

"Prepare for tomorrow. Understand how to solve equations of type X. Use whatever resources you want (AI, YouTube, textbook, explanations from colleagues). Come with questions if something is not clear to you. You don't have to hand in anything written."

Or the more structured version: "Ask the AI to solve 3 equations and explain each step to you. Write down on a sheet (just for you) what steps you didn't understand or what surprised you."

AT SCHOOL (Evaluation - zero AI):

First 20 minutes: Each student solves 3 equations on a sheet, by hand. Hand in the sheet with their name. Different versions for each bench (so they don't copy from their neighbor).

You correct 75 equations (25 students × 3), not 250. And you know that they are all real, because they wrote them in front of you.

For 10-14 years:

The equations can be simpler, the time can be 25-30 min instead of 20. You can allow a "warm-up" equation that they do together at the board, then 2-3 alone.

For 14-18 years old:

The equations can be more complex or you may also ask for a written explanation: "Choose one of the 3 equations and explain why you chose method X, not method Y."

Example 2 - Physics (formula problems):**Flipped 2.0:****HOME:**

"Tomorrow, we have a test on the application of Newton's laws. Prepare however you want. If you want to ask the AI to generate 10 problems for you and solve them, perfect. If you want to solve them from the textbook, perfect. If you want to watch YouTube for explanations, perfect. The only rule: come prepared."

Plus, option: "If you find a problem that the AI solves incorrectly or that you don't understand, write it down. We'll discuss it tomorrow."

AT SCHOOL:

First 30 min: Students have to solve 2 problems on the sheet. One direct (formula application), one indirect (requires you to think about which law you are applying). I hand over the sheet.

Next 15 min: Group discussion - did anyone find an AI bug? Did anyone have a different approach? We learn from diversity, not uniformity.

Example 3 - Computer science (programming):**Flipped 2.0:****HOME:**

"Tomorrow we're writing code in class for problem X. Prepare at home: try to understand the algorithm, the structure, the logic. If you want to ask the AI to generate code and study it, that's fine. If you want to imprison yourself too, and compare with what the AI generates, even better."

AT SCHOOL:

Students write code from scratch, on paper or on a computer (but without internet/AI access). It doesn't have to be perfect - syntax errors are okay. You're evaluating **logic**, not perfection.

For 10-14 years:

The code can be pseudo-code or a flowchart, not necessarily exact syntax. What's important is the logic: "If X, then Y, otherwise Z."

For 14-18 years old:

Functional code, correct syntax. Bonus: "Explain why you chose this data structure, not another."

3.3.4 PRACTICAL IMPLEMENTATION - HUMANITIES**Example 1 - Native Language (argumentative essay):****The classic (dead) model:**

Homework: Write a 500-word essay.

At school: The teacher corrects 25 essays, of which over 20 are written by AI, with or without "cosmetic" changes.

Flipped 2.0:**HOME (Preparation - Free AI):**

"Tomorrow we are writing an essay in class about topic X. Prepare: think of 3-5 arguments for or against. You can ask the AI to generate 10 arguments for you and choose the best ones. You can talk to family/friends. You can read articles. Come tomorrow with ideas, not written text."

AT SCHOOL (Evaluation - zero AI):

First 30-40 minutes: Each student writes the essay, by hand, on a sheet of paper. They can refer to their homework sheet of notes (encourage them to have it), but they can't copy the entire text - it's just a reminder note.

You correct 25 essays, handwritten, in different calligraphy, with erasures, with personal style. You can see who is thinking and who is repeating mechanically.

For 10-14 years:

The essay can be shorter (200-300 words), the structure can be simpler (introduction, 2 arguments, conclusion). You can allow 5-10 minutes of discussion in groups of 2-3 before the writing stage - to test their ideas orally.

For 14-18 years old:

Full essay (500 words), complex structure. You can also ask for a self-evaluation at the end: "What argument do you think is the weakest in your essay and why did you keep it?"

Example 2 - History (event analysis), Flipped 2.0:

HOME:

"Tomorrow we're writing about the causes of the Revolution in X. Prepare yourself: read the materials, ask the AI if you want to explain what you don't understand, compare different sources. If the AI gives you an explanation that contradicts the textbook, write it down, and we'll discuss it tomorrow."

AT SCHOOL:

First 30 min: Each student writes an analysis (1-2 pages) about 2-3 causes they consider essential. It doesn't have to be all the causes from the textbook - they can choose the ones they think are most important and argue why.

Next 10 min: Micro-check - 3 students orally explain why they chose the respective causes.

Example 3 - Foreign language (composition), Flipped 2.0:

HOME:

"Tomorrow we're writing in [foreign language] about topic X. Prepare: think about the vocabulary you need, the structure, the verb tenses. You can use AI to generate example sentences for you, to check grammar, for anything. Come prepared with clear ideas."

AT SCHOOL:

First 35 min: Writing in [foreign language], by hand. I can have a physical dictionary on my desk (not my phone). You rate content + grammatical correctness.

For 10-14 years:

The essay can be shorter (150-200 words), with a more concrete topic ("Describe your room" instead of "Argue about the importance of education").

For 14-18 years old:

More complex composition (300 words), abstract topic. You can also ask for the use of specific grammatical structures: "Use at least 2 conditional sentences and 1 relative clause."

3.3.5 PREDICTABLE RESISTANCE

When you announce **Flipped 2.0**, you will encounter 3 types of resistance:

1. From students: "But why should I write by hand? It's 2026!"

Answer: "Because your hand and your brain are connected in a way that a keyboard doesn't. When you write by hand, you're forced to think slower, to choose your words more carefully, to feel the friction. This is training, not punishment. Just like an athlete runs on sand to be faster on asphalt."

More direct version (for 14-18): "Because I want to see what you can do, not what the AI can do. If that annoys you, ask yourself why."

2. From parents: "My child has a lower grade now!"

Answer: "Normal. Before, he was grading the AI's work. Now he's grading his own work. The difference you see is not that he learned less, but that before **you had an illusion**. I'd rather know the truth now, when we can correct it, than find out in 5 years when it's too late."

Gentler tone (if the parent is concerned, not aggressive): "I understand that it's worrying. But the real grade shows where we need to help the child **grow**. The fake grade shows that he knows how to use a phone."

3. From colleagues: "I don't have time to correct in class!"

Answer: "You don't correct in class. You correct at home, like always. The difference is that now you correct real papers, not fake papers. You save time, you don't waste it. You don't stop wondering 'is this written by him or ChatGPT?' - you know for sure."

3.3.6 TIME SAVING

Let's do the math:

The classic model:

- Homework: 25 students × 2 pages = 50 pages to correct
- Proofreading time: 50 pages × 3 min/page = 150 minutes (2.5 hours)
- Maybe 80-90% are generated by AI → you waste 1.5-2 hours correcting "fake" text
- Plus: verification questions, suspicions, conflict with students who deny

Flipped 2.0:

- Classroom assessment: 25 students × 1-2 pages written in 30-40 min

- Proofreading time: 25-50 pages × 3 min/page = 75-150 minutes (1.2-2.5 hours)
- Of which: 100% are real → zero time wasted on fake text
- Zero suspicions, zero "detection" conflicts

PLUS: Invisible bonuses:

1. Students come more prepared (because they can't rely on AI during assessment)
2. You correct faster (because texts have personality, they are not standardized by AI)
3. Your feedback is more relevant (because you see real errors, not artifacts of poorly edited AI)

Conclusion: You don't necessarily save time on proofreading. But you save **mental time** - you don't have to doubt, check, argue. And the quality of the information you receive is infinitely superior.

3.3.7 GRADUAL VARIANT (if you can't make a radical leap)

If you are in a rigid system or have students/parents who cannot accept sudden change, implement progressively:

Month 1-2: Testing (announce transparently)

"For the next 2 months, we're going to experiment. Once a week, homework will be done in class, not at home. The rest of the week, as before. I want to see the differences."

Month 3-4: Expansion (if it works)

"I've seen it work. We're increasing to 2 out of 3 homework assignments in class."

Month 5+: Normalization

"From now on, everything that is assessed is written in class. At home it is for free preparation."

Or, if you can't control the system (the Administration requires X homework over a period of time), you do a hybrid:

- 1) "Formal" homework (noted in the catalog) = in class
- 2) "Preparatory" homework (ungraded) = at home, with free AI

This way you meet bureaucratic requirements, but **you evaluate realistically.**

3.2.8 SOVEREIGN SCHOOL

(Data Privacy and Local AI)

In an international context (GDPR in Europe, COPPA/FERPA in the US), the use of AI raises huge privacy issues for student data.

The problem: When students use commercial versions (ChatGPT, Gemini, etc.), their data (and their thinking errors) are stored on external servers.

The Solution: We recommend schools explore “Local AI.” Using free software (such as Ollama), a school can run language models (Llama 3 or Mistral) on a dedicated computer or multiple computers in the computer lab, without an Internet connection.

Advantage: Zero data leaks. Zero subscription costs. Total cognitive sovereignty over the learning environment.

Disadvantage: Consistent material investment, PCs must be new generation, with sufficient processing power and memory.

3.4: KNOWLEDGE ASSESSMENT

(Visible History + Equation 50% Tb / 50% Tg)

3.4.1 WHY CLASSIC EVALUATION IS OUTDATED

The classic evaluation measures only one thing: the final product. The essay has 500 words, correct structure, zero grammatical errors, coherent arguments. Note: 10. The problem is that you don't know if the essay was written in 2 hours of cognitive sweating or in 3 minutes of copy -paste, possibly followed by 5-10 minutes of beautification.

The final product tells you nothing about the process. And **the process is everything**. The process is where learning happens, where neurons connect, where error becomes lesson. When you only evaluate the product, you reward those who hide the process best. That is, those who use AI elegantly and leave no trace.

The solution is not to become a detective. The solution is to change **what** you measure.

Instead of just measuring "What did you deliver?", you measure "How did you get there?" The process becomes visible, measurable, valuable.

3.4.2 VISIBLE HISTORY (“*VERSION HISTORY*”)

The basic concept:

When you write something on a computer, every change leaves a trace. Google Docs, Microsoft Word, any modern platform keeps a complete log: what you wrote, when you wrote it, what you deleted, what you rewrote, how long it took between the first draft and the final draft. This data is a direct window into the process.

A student writing alone: erasures, rewordings, pauses for thought, gradual growth of the text. A block of 50 words appears in 5 minutes, then a 3-minute break, then another 40 words, then an erasure, then rewritten.

A student using AI: a 300-word block appears in 30 seconds. Then 5 minutes of superficial editing - changing "thus" to "therefore", "in conclusion" to "in order to conclude".

Implementation in Humanities (essay/composition):

Ask students to write in Google Docs with " Version History " enabled (it is enabled *by default* - no special setting is required). When submitting the assignment, you not only receive the final document. You also receive the " View Version History " or check it yourself.

What are you looking for in history:

Organic growth: the text grows gradually, perhaps 50-100 words per section of text, with pauses in between. A sign that the student is thinking, writing, stopping, thinking again.

Significant deletions: the student wrote a paragraph, erased it completely, wrote something else. This is active thinking - "no, that doesn't sound right, I'll try something different."

Total time: a 500-word essay written by a human takes between 30-90 minutes (depending on age and experience). If the total time is under 15 minutes, red flag major.

For 10-14 years:

Expectations are more relaxed. A 300-word essay written in 40-60 minutes is reasonable. Lots of erasures and rewording are normal - thinking is still forming. You can teach them: "I want to see that you tried, that you got stuck somewhere, that you rewrote. That shows that you're working with your brain."

For 14-18 years old:

Expectations are rising. A 500-word essay written in 30-50 minutes is reasonable for an experienced student. Too few erasures can also be a red flag - means the text came too "clean" too quickly. A good essay has scars.

What to do when you catch fraud through Version History:

You don't accuse publicly. You send the student a private message: "I noticed in the document history that a block of 400 words appeared in 10 seconds. That's physically impossible to type. Do you want to discuss?" It's not an interrogation. It's a conversation. Sometimes the student admits, sometimes he has an explanation (he wrote in another document and copy -pasted from his own older text - verifiable). But, more often than not, his silence confirms.

Limitation of the method:

It only works for work done on the computer. If the student writes in another editor (Word offline, Notepad, even on paper) and then copy -pastes into Google Docs, the history is useless. That's why this method is combined with other methods - it's not the only one.

3.4.3 "VERSION HISTORY" ON PAPER

If the student writes by hand (as I suggested in Flipped Classroom 2.0), you can see the process directly on paper, without technology.

What are you looking for:

Visible erasures: words crossed out with a line, paragraphs circled and moved, arrows restructuring the order of ideas. These are the scars of authentic thinking.

Inconsistent handwriting: when you write quickly, then stop and think, then resume writing, speed shows in your handwriting. A uniformly written text, without variation in pressure or speed, is suspicious (either copied from somewhere, or copied from a neighbor, or rewritten "cleanly" after it was generated).

Odd spacing: If the student left large spaces between paragraphs because they "didn't know what to write there", then filled them in later (with different ink or different pressure), that's noticeable. And it's normal. It's thinking.

Full margins: Thinking students often write notes in the margins, alternative ideas, questions for themselves. If the paper is "clean" like a printed document, it's suspicious.

For 10-14 years:

Erasures and visual chaos are very common. Don't penalize for it - it's part of the process. **You can even encourage it:** "I want to see that you've corrected yourself, that you've changed something. If the sheet is too clean, I think you've rewritten it from a draft and maybe lost good ideas in the process."

For 14-18 years old:

Older students may have more stable handwriting and fewer visible erasures - they've already developed a writing style. But you should still see traces of thought: words replaced; ideas restructured. If the text looks like a museum manuscript - it's suspicious.

3.4.4 EQUATION 50% Tb / 50% Tg (Biological vs Generated)

Theoretical concept: Tb = Biological Time - the time the human brain spends processing, thinking, building. **Tg = Generated Time** - the time the machine spends generating output.

In a world without AI, Tg was zero. It was always Tb. Now, Tg can now be 90% of the process, and Tb only 10% (speed reading, approval, beautification, submission). When Tb drops below a critical threshold, **atrophy is inevitable.**

Practical translation for evaluation:

Instead of giving all the grade on the final product (dominant Tg), divide the grade into two equal components:

- 50% for the product (Tg): how good the text is, how correct the exercise is, how coherent the argumentation is. That's what you've always evaluated.

- 50% for process (Tb): how much time the student spent thinking clearly, how much they struggled with ideas, how much they made mistakes and corrected themselves. This is new.

Implementation in Math & Sciences - Mathematics:

Tg component (50% of the grade): Is the final solution, correct? Is the numerical answer, correct? Are all formulas applied correctly?

Component Tb (50% of the grade): Did the student show the intermediate steps? When he made an error (normal in the solving

process), did he visibly correct it or did he completely erase it and rewrite "cleanly"? Did he explain why he chose a particular method?

Concrete example:

Student A: Perfect solution, without any errors, written cleanly, without erasures. Correct result. Tg score: 10/10 (the product is perfect) Tb score: 3/10 (the process is invisible - either he is a genius or he copied, probably the second option) Final score: $(10+3)/2=6.5$.

Student B: Solution with 2 minor errors, one method tried and abandoned (visible on the sheet), explanation written at the end: "I tried method X but it didn't work for reason Y, and then I used method Z and that's how it worked." **Tg grade: 7/10** (product has minor errors) **Tb grade: 9/10** (the process is completely visible; the student is thinking) Final grade: $(7+9)/2=8$.

The apparent paradox: Student B, who made more mistakes, gets a higher grade. **It's not a paradox.** It's recalibration. Student B learns. Student A consumes.

For 10-14 years:

The Tb component can be more generous. If the student tried, even if the method was completely wrong, Tb can be 6-7/10. "You thought, you tried, it didn't work out, but you learned something from the mistake." The product (Tg) may be weak, but the effort (Tb) is visible.

For 14-18 years old:

The Tb component becomes more demanding. It's not enough to try, they have to show why they tried that method, what made them abandon it, what they learned. Tb requires visible metacognition, not just "I tried and it didn't work."

Implementation in Humanities - Essay:

Tg component (50% of the grade): Is the final essay coherent? Does it have a logical structure? Are the arguments well supported? Is the grammar correct?

Component Tb (50% of the grade): How much time the student spent writing (from "Version History" or estimated from the complexity and length of the text)? How many visible rewordings? Did he reject ideas and explain why?

Concrete example:

Student C: Perfect essay, 500 words, zero mistakes, written in 12 minutes according to Google Docs History, with a 300-word block

appearing in 10 seconds. Tg score: 10/10 (the product is perfect) Tb score: 2/10 (the process is almost absent) Final score: $(10+2)/2=6$.

Student D: Good but not perfect essay, 500 words, a few minor mistakes, written in 55 minutes, with 4-5 visible rewords, one paragraph completely deleted and rewritten differently. Tg score: 7.5/10 (product has small imperfections) Tb score: 9/10 (process is very visible, authentic thinking) Final score: $(7.5+9)/2=8.25$.

Student D thus gets a better grade. Not because the product is better, but because the process is real.

3.4.5 CONCRETE EVALUATION GRADE

GRID FOR REAL SCIENCES (Mathematics/Physics/Chemistry):

COMPONENT Tg - Final product (50 points):

Correctness: Is the final answer, correct? (0-20 points)

Method: Is the formula/algorithm applying the right one? (0-15 points)

Presentation: Are the steps clearly written, not just the final answer? (0-15 points)

COMPONENT Tb - Visible process (50 points):

Multiple attempts: Are alternative methods seen tried? (0-15 points)

0 points: No visible attempt, everything "clean"

7-8 points: A visible attempt, then the correct method

13-15 points: Multiple trials, comparisons between methods

Corrections: Errors seen and visibly corrected? (0-15 points)

0 points: No visible errors (suspect) or uncorrected errors

7-8 points: Some minor corrections

13-15 points: Major corrections, shows real-time learning

Explanation: The student explains WHY he/she chose a method? (0-20 points)

0 points: No explanation

10 points: Minimal explanation ("I used formula X")

18-20 points: Full explanation ("I tried Y but it didn't work because Z, I switched to X because...")

For 10-14 years: Lower the expectations on "Explanation" - 10 points for minimal explanation is enough. Increase the generosity on "Multiple Attempts" - any visible attempt gets points, even if the method is completely wrong.

For 14-18 years old: Raise expectations - explanations need to be more sophisticated, showing conceptual understanding, not just mechanical application.

GRID FOR HUMANITIES (Native Language / History)

COMPONENT Tg - Final product (50 points):

Content: Are the arguments solid and relevant? (0-20 points)

Structure: Does the text have logical coherence? (0-15 points)

Language: Grammar, spelling, appropriate vocabulary? (0-15 points)

COMPONENT Tb - Visible process (50 points):

Time invested: How much time did you spend writing? (0-15 points)

0 points: Under 15 minutes for 500 words (naturally impossible)

7-8 points: 15-30 minutes (fast, but possible)

13-15 points: 30-60 minutes (reasonable for thinking + writing)

Reformulations: How many ideas were rewritten/restructured? (0-15 points)

0 points: "Clean" text, no changes (suspicious)

7-8 points: Some minor changes (words replaced)

13-15 points: Major rewording (rewritten paragraphs, moved ideas)

Vulnerability: Does the text have a personal voice or is it sterile? (0-20 points)

0 points: Generic text, sounds like a textbook

10 points: A few moments of personal voice

18-20 points: Distinctive voice, personal opinions, examples from own experience

For 10-14 years: "Vulnerability" can be assessed more leniently - it's enough to have a personal phrase ("I think..." or "when I saw..."). For "Time invested", 40-60 minutes for 300 words is quite reasonable.

For 14-18 years: "Vulnerability" requires more depth - not just "I believe", but reasoning why you believe so, expressed doubts, acknowledged contradictions. On "Time invested", under 30 minutes for 500 words becomes red flag.

3.4.6 HOW TO COMMUNICATE THE NEW EVALUATION

When you announce that from now on 50% of the grade is on the process, not the product, you will inevitably hear:

From students: "But this is unfair! I worked hard and didn't make any mistakes, why should I get a low grade?"

Answer: "Actually, it's the other way around. If you worked hard and it shows, you get a higher grade even if you made a mistake. The new assessment **protects you**, not those who copy elegantly. If you made a mistake, and you see 10 attempts on the sheet, you get an 8. If you answered perfectly, but the sheet is suspiciously clean, you get a 6. It's your choice."

From parents: "My child did everything right, why didn't he get the maximum grade?"

Answer: "The product is perfect, that's true. But the process is invisible. Either your child is a genius who never makes mistakes (in which case, congratulations, but it's statistically almost impossible), or someone else did the hard work. I'm not blaming anyone. The new assessment simply demands transparency. If the child shows how they arrived at the answer next time, the grade will reflect that."

From colleagues: "That's subjective! How do you measure the 'process'?"

Answer: "It's less subjective than you think." Version " History is objective - time is time. The erasures on the page are objective - either they are or they are not. And yes, the 'vulnerability' or 'explanation' component has a dose of subjectivity, just like grading an essay 'good' vs. 'excellent'. But at least now we're measuring something that matters - learning - not just the ability to hide the source."

3.4.7 BONUS: SELF-EVALUATION (Student self-evaluation)

An advanced option, especially for 14-18 years old: ask the student to evaluate their own process before submitting the assignment.

At the end of the assignment, add a mandatory section: "Self-assessment (does not influence the grade, but if missing, it means -1 point for incomplete submission)".

Questions: How long did you spend working on this? (honest estimate) What was the hardest part? Why? Did you use AI? If so, for what? (generation, verification, explanations, other) If you had to redo

the assignment without any external help, what percentage of it could you reproduce (0-100%)?

The last question is crucial. If the student honestly answers "30%", you know they have FCPT. If they answer "90%", then they fail the Micro-check, you know they are lying or don't know their own limits (both indicate problems).

Self-assessment doesn't directly change the grade, but it gives you context. And it forces the student to reflect: "Can I really reproduce this myself?"

3.5: Predictable resistance (*Students, Parents, Education System*)

3.5.1 WHY RESISTANCE IS INEVITABLE

When you change the rules of the game, players who were winning under the old rules (maybe) will resist. Not out of malice, but out of survival instinct. Students who were getting high grades with minimal effort will feel threatened. Parents who saw "success" in their child may feel uncomfortable when their grades drop. Colleagues who have been doing the same routines for 20 years will feel attacked.

Resistance doesn't mean you're wrong. It means you've hit a nerve. If you implement the METEORAIT protocols and no one objects - it means you haven't really implemented them. Resistance is a sign that the old system is feeling the pressure.

The point of this chapter is not how to avoid resistance. It's how to be prepared for it. To have clear, firm answers, based on data, not emotion. To transform the teacher from "the one who complicates things" to "the guardian of mental health."

3.5.2 STUDENT RESISTANCE

WHAT YOU WILL HEAR (Top 5 objections):

1. "But all the other teachers let us use AI! Why are you different?"
2. "It's 2026! Why write by hand when there's technology?"
3. "It's not my time! If AI can do this in 5 minutes, why should I wait 2 hours?"
4. "But I really think so! I didn't copy, my style resembles AI!"
5. "I'm going to do badly in the exams! The others have high grades with AI, I have low grades without!"

HOW TO ANSWER:

Response to objection 1 - "The other teachers allow it":

Version for 10-14 years (milder): "Other teachers may have different rules. Each teacher decides how they evaluate. I chose to evaluate what you can do, not what the machine can do. If this makes you uncomfortable, that's normal - it means you're getting used to being helped too much. But discomfort is exactly where you grow."

The 14-18 version (more direct): "Other teachers have other priorities. I prioritize your real ability. If you want high grades without effort, this is the wrong class. If you want to get to college or a job and not be outdone by those who really know what they're doing, stay here and we'll work together. You choose."

The authoritative version (for both ages): "It's not a personal rule. It's based on research on cognitive atrophy. When you constantly delegate thinking, your brain adapts to not thinking anymore. It's called FCPT - False Cognitive Power Transfer. I don't make up rules, I enforce mental safety protocols."

Answer to objection 2 - "Why write by hand?":

"Because the hand and the brain are directly connected. When you write by hand, you think slower, you choose your words more carefully, you feel the friction. This is like a workout, like athletes who run with weights do - not because there is no electric bike, but because they want to be stronger. Do you want to be stronger or more comfortable?"

With authority: "There are neurological studies that show that handwriting activates areas of the brain that typing doesn't. It's not nostalgia, it's biology. If you want links, I'll give you some."

Response to objection 3 - "It's not my time!":

"That's right, it's not your time. But learning isn't about time either, it's about transformation. If AI does your homework in 5 minutes, you save 1 hour and 55 minutes. The question is: what do you do with that time? If you invest it in learning more deeply, perfectly. If you spend it scrolling on TikTok or Instagram, you've wasted not only time, but also the opportunity to become more capable."

Harder version (14-18 years old): "Your time is no more valuable than your brain. If you choose to save time now and become

addicted to machines, in 10 years you will pay with years of professional stagnation. The decision is yours, just as the future is yours."

Response to objection 4 - "My style resembles AI!":

"It's possible. Let's test it: take your last assignment and explain to me verbally, without looking at it, what the main idea was and why you structured it that way. If you can, great - the style is yours. If you can't, then it wasn't your style, it was the machine's. It's not an accusation, it's a **diagnosis**."

Plus: "If your natural style resembles AI, it means you think in clichés and generic formulas. That's not a quality, it's a signal that you need to develop your personal voice. That's exactly why we do these exercises."

Answer to objection 5 - "I'll do badly in the exams!":

"False. You'll be the only one prepared. They're getting high grades now because the AI is doing their homework. When the exam comes, when the AI disappears, they're left with nothing. You've been thinking for weeks on your own - when the exam comes, you're already trained. They're like a bodybuilder on steroids taking pictures on Instagram. You're like a wrestler training in an empty gym. Who do you think is going to come out on top when the real match comes?"

The milder version (ages 10-14): "It's the other way around. The others seem good now because the machine helps them. But when the big test comes (exam, interview, real-life situation), the machine is no longer there. You will be prepared, they won't."

3.5.3 PARENTAL RESISTANCE

WHAT YOU WILL HEAR (Top 5 objections):

1. "My child has lower grades now! What did you do?"
2. "You're preventing him from using technology! You're preparing him for the past, not the future!"
3. "The other kids have higher grades with AI. Why is my child at a disadvantage?"
4. "You have no right to ban AI! It's discrimination!"
5. "My child says you are too strict. He feels stressed."

HOW TO RESPOND (Email/face-to-face conversations):

Response to Objection 1 - "Lower Grades"

Email (formal):

"Dear [Parent Name],

I understand your concern about [Student Name]'s grades. Let me clarify what has changed and why.

Before: [Student Name] was handing in assignments that were graded and the grade reflected the quality of those assignments. Problem: I wasn't sure how much of those assignments were the child's work and how much was the AI assistant's work.

Now: I assess what your child can produce independently, under observation, in the classroom. The grade reflects actual ability, not assisted ability.

The difference you see doesn't mean [Student Name] learned less. It means you're seeing the truth now. I'd rather know the truth now, when we can help, than discover in 5 years on a major exam or job interview that the foundation is fragile.

Reference: According to studies on Cognitive Atrophy through Delegation (a phenomenon documented in educational psychology), constant externalization of thinking leads to a decrease in the capacity for independent processing. This is not personal opinion, it is a documented mechanism.

Proposal: Let's discuss together how we can help [Student Name] develop his or her true potential.

Face-to-face conversation (more direct):

"I understand that it's worrying. But let's be honest: would you rather have me see now that [Student Name] has gaps or would you rather discover in 3 years when you take the Final Exams? The old grade was a comfortable illusion. The new grade is the uncomfortable reality. But reality can be corrected. Illusion cannot."

Response to Objection 2 - "Hinder Technology"

"I'm not stopping him from using technology. I'm teaching him to use it **without being dependent** on it. The difference is crucial. Your child will live in a world full of AI. The question is not whether he will use AI, but whether **he will control AI** or **be controlled** by AI."

"According to Cognitive Divergence Theory, the population will stratify into 3 levels: L1 (Passengers - completely dependent on AI), L2 (Operators - operate AI but do not deeply understand), L3 (Architects - control the process). In 10-20 years, the difference between these levels could reach tens of times differences, in terms of capacity. I am preparing [Student Name] to be L3, not L1."

Response to Objection 3 - "Others have higher grades"

"It's true. The others have higher grades because I can't control what other teachers do. But think about it this way: if 10 teachers give swimming certificates, perhaps without checking if those kids can swim, and I'm the only one who actually puts them in the water, naturally my grades seem lower. But when it comes to real competition (national exam, college, life), who do you think will cope?"

Diplomatic version: "I don't judge other students - everyone has their own methods. But I choose to evaluate what your child can do on their own. If that means temporarily lower grades, I accept it. Because I'd rather [Student Name] have a solid foundation than have a high GPA on quicksand."

Response to Objection 4 - "Discrimination"

"I don't ban AI. I allow it freely at home for preparation. What I don't allow is to evaluate the AI's work instead of the child's work. It's not discrimination, it's honesty. If [Student Name] uses AI at home to learn (understand concepts, check logic), great. If he uses it to avoid thinking, then the grade reflects that. I don't punish the use of AI, I punish the absence of his own thinking."

Legal plus (if the parent threatens): "The school regulations allow me to establish the evaluation methods as long as they are transparent and applied consistently. I have clearly announced the rules from the beginning. All students have the same rules. I do not discriminate against anyone - everyone is evaluated according to the same criteria: the ability to produce independently."

Response to objection 5 - "The child is stressed"

The empathetic version (for worried, non-aggressive parents): "I get it. Change is stressful. [Student's name] was used to a certain way of working and now he has to adapt. But the stress he feels now is productive stress - it's a signal that his brain is working, adapting,

growing. It's like at the gym: muscles hurt after a workout. If they don't hurt, you didn't work hard enough. If [Student's name] doesn't feel any pressure, it means he's not learning anything new."

The firm version (for parents who want to negotiate standards): "Your child is feeling pressure because for the first time they have to think without outside help. That's not abuse, that's education. If you'd rather [Student Name] never feel pressure, you're right - I'm not the right teacher. But if you want [Student Name] to be prepared for a world where pressure is constant, then the stress now is training, not punishment."

3.5.4 SYSTEM RESISTANCE (Colleagues, Managers, Superintendents)

WHAT YOU WILL HEAR:

1. From colleagues: "You're complicating things unnecessarily. Let them use AI, that's the future anyway."
2. From the principals: "You have a lot of complaints from parents. Moderate yourself."
3. From the Superintendents: "You have to give X homework per quarter. The regulations require it."
4. From colleagues: "It's subjective! How do you measure the 'process'?"

HOW TO ANSWER:

Response to objection 1 - "Uselessly complicit"

"I don't complicate, I recalibrate. Yes, AI is the future. But the future doesn't belong to those who know how to press buttons, but to those who know how to decide which buttons to press and when not to press them at all. The difference between an operator (L2) and an architect (L3) is that the former is replaceable, the latter is not. I teach them to be L3, not to be L2 or even L1. If you want to train them only to be operators, I respect that. I want something else for them."

Diplomatic version: "I respect your opinion. But I've seen data from the first 6 months of introducing AI in education (2023-2024). Students who used AI intensively have measurable declines in standardized tests. It's not theory, it's measured. I just apply mental

safety protocols. If I make a mistake and lose 6 months, we recover. If you make a mistake and lose 3 years, we don't recover. I prefer to err on the side of caution."

Response to Objection 2 - "Too many complaints"

Email (formal):

"Dear Management,

I understand that you have received negative feedback from some parents regarding my assessment methods. I appreciate you giving me the opportunity to clarify.

Background: We have implemented protocols based on recent research on the impact of AI on cognitive development (Stan, 2025; similar studies from the US and EU). These are not personal or arbitrary methods, but the application of recommended standards to protect students' cognitive capacity.

Concrete facts: Over the last 8 weeks, I have noticed the following:

- 70% of students show improvement in oral explanation ability (Micro-checking works)
- Average independent work time (measured in class) increased from 10 to 20-25 minutes (increased resistance to frustration)
- Complaints come from 15-20% of parents - those whose children had artificial grades before

Proposal: I am willing to present a session to the School Board about these methods and why I believe they are necessary. If there is institutional resistance, I respect the school's decision, but I ask that the decision be made after presenting the data, not just after emotional feedback."

Face-to-face conversation: "I know it's uncomfortable to receive complaints. But the question is: are the complaints legitimate or are they resistance to increased standards? If a parent complains that the gym teacher is being too harsh because he makes them run, is the solution to let them sit on the bench or explain why running is necessary? I apply the second principle."

Answer to objection 3 - "X homework must be done in X period"

"I understand the requirement. The difference is that the assessed (graded) assignments are done in class, not at home. The

homework is preparatory (ungraded or graded with Present/Absent). This way I respect the bureaucratic requirement, but I evaluate the real thing. The regulation does not specify where the homework must be done, only that it must exist."

If the Superintendent insists: "If the regulations require homework to be done at home and graded, then I ask for confirmation that the school accepts that grades can reflect the AI's work, not the students. If they don't accept, then they must allow me to assess under controlled conditions. I can't do both - respect the form and guarantee the substance."

Response to Objection 4 - "It's subjective"

"It's less subjective than classic evaluation. When you say an essay is 'very good', what are you measuring? Your subjective impression. When I say a process is visible, I have data: " Version " History " (objective timestamps), deletions on the sheet (visible), timed work time. The 'vulnerability' component has subjectivity, right, just like the 'quality of an argument' in your classic evaluation. But at least now we're measuring something relevant - learning - not just the final product that can be generated 100% by AI."

3.5.5 DOCUMENTATION

When applying METEORAIT protocols, build a "protection file":

- 1. Initial announcement (written, dated, signed by students / parents or sent by email):** "Starting on date X, the assessment in my class will be based 50% on the product and 50% on the process. The process includes: time invested, visible attempts, corrections made, explanations provided. All students are assessed according to the same criteria. Using AI at home for preparation is allowed and encouraged. The final assessment is done in class, independently."
- 2. Evaluation grids (public, displayed in the classroom and on the platform):** The concrete grids in Chapter 3.4 - so any parent can see exactly what you are measuring and how.
- 3. Observation journal (private, for you):** You write down: date, student, what you observed (Micro-check, behavior, progress). If a complaint comes, you have data, not just impressions.

4. Comparative results (after 3 months): Measures: how many students can orally explain what they wrote (at the beginning vs after 3 months), average time to resist frustration (at the beginning vs after 3 months). No scientific study needed, just simple data that shows a trend.

When the pressure comes, don't defend yourself emotionally. Present the case: "I announced transparently, I applied consistently, I measured objectively. Here are the data."

3.6: SELF-SABOTAGE

(When the teacher gives up from fatigue + Fail -Safe Protocol)

3.6.1 THE ELEPHANT IN THE ROOM

Now we're talking about what none of the previous chapters directly acknowledge: you, the teacher reading this, will give in at some point. Not "maybe." Not "probably." **You will definitely give in.**

Not because you're weak. Not because you don't believe in protocols. But because you're human, you're tired, you have 5 classes, 150 students, 40-50 hours a week, teacher councils, parent meetings, reports, assessments, bureaucracy, and a personal life waiting for you at home. And on a Wednesday, at 7 pm, when you still have 40 papers to correct and tomorrow you have 6 hours, you'll think: "Okay, I'll give them homework tomorrow and that's it."

That's self-sabotage. It's not dramatic. It's not a big decision. It's a small, tired concession that you justify with "just this once." The problem isn't that you're doing it. The problem is that you don't have a protocol for coming back. And "just this once" becomes "just this week", which becomes "just until the holidays", which becomes "I've given up completely but I'm pretending I haven't."

This chapter isn't about never giving in. It's about consciously giving in and coming back without feeling guilty.

3.6.2 WHY EVEN CONVINCED TEACHERS GIVE UP

Reason 1 - Chronic fatigue (not dramatic, but cumulative)

It's not a spectacular burnout. It's a silent exhaustion. Monday: Micro-check in 3 classes, everything is going well. Tuesday: meeting

with complaining parents, 2 hours wasted. Wednesday: surprise Superintendent, stress. Thursday: effort to write assessments in class when the curriculum requires you to advance with the subject. Friday: you realize you've corrected half of the papers and you're behind.

On Sunday evening, when you think about the week ahead, you feel the weight. And then you think, "If I give them homework, I gain 2 hours. I can correct faster, I can breathe." It's not laziness. It's the mathematics of survival.

Reason 2 - Isolation (you're the only one in school who does this)

When you apply the METEORAIT protocols and your peers don't, you become the anomaly. Students complain: "But Mrs. X leaves us with the phone!" Parents compare: "Why do your grades get lower?" The principal looks at you strangely: "Why do you have so many complaints?"

Isolation is corrosive. When all your peers are going one way and you're the only one going another, you start to doubt yourself. "Maybe I'm overreacting. Maybe it's just easier to just leave the AI and be done with it." It's not a lack of conviction. It's **social exhaustion**.

Reason 3 - Delayed feedback (results are seen in months, not days)

When you implement protocols, you don't see miracles in the first month. Students complain, grades drop, parents are unhappy. Improvement comes after 2-3 months - when students start to think more clearly, explain better, withstand frustration better. But 2-3 months is an eternity when you're in the middle of chaos.

The human brain is designed to respond to immediate feedback. "I gave the easy assignment → happy students → I have peace" = fast reward circuit. "I applied the protocol → unhappy students → stressed me → results in 3 months" = delayed circuit. Guess who wins when you're exhausted?

Reason 4 - Lack of community (you have no one to talk to about it):

You can't talk to your colleagues - they judge you or don't understand. You can't talk to the principal - he's preoccupied with complaints. You can't talk to the students - they're the source of

pressure. You can't talk to the parents - they're the other source of pressure. You're left alone with your doubts.

When you're alone with a difficult effort, you give in. Not because the effort is too great, but because the lack of external validation eats away at you.

3.6.3 SIGNS THAT YOU ARE GIVING UP

Check the behaviors you observe in yourself. 4+ ticks = high risk of failure:

A - Small compromises:

- "Just this once" I'll let them hand in their homework
- We're skipping Micro-verification for a week, because I don't have time
- I give them an "easy" homework assignment so they don't complain anymore
- I accept a vague explanation at Micro-verification because I'm tired of insisting

B - Justifications:

- "My students are not prepared for such high standards"
- "Maybe I'm exaggerating, maybe it's enough to apply partially"
- "Other teachers don't do this and their students manage"
- "Parents are right, their children really are stressed"

C - Avoidance:

- I avoid checking "Version History" because it takes me time
- I avoid giving assessments in class because it delays the subject
- I avoid conflicts with my parents, I accept compromises
- I no longer read materials about FCPT/Cognitive Divergence, because it demoralizes me

D - Emotional fatigue:

- I think about the coming week on Sunday evening and feel dread.
- I feel resentment towards students when they ask for explanations
- I feel like I'm fighting alone against everyone
- I have fantasies about what it would be like if I gave up and became like everyone else.

If you checked 4+, don't judge yourself. Just admit it: you give in. And that's okay. Now comes the return protocol.

3.6.4 FAIL-SAFE PROTOCOL

(How to come back without feeling guilty)

STEP 1 - Admit the failure (without self-flagellation):

Don't say, "I'm a failure, I gave up, I'm a hypocrite." Say, "I gave up last week. That's normal. I'm tired. What can I do differently this week?"

The difference is crucial. Self-flagellation paralyzes you. Neutral recognition mobilizes you.

STEP 2 - Micro-Rebound (don't try to come back 100% suddenly):

Don't say: "I'm starting everything 100% again on Monday - Micro-checking daily, in-class assessments, everything." Do: "I'm starting Micro-checking in one class again on Monday. The rest are on hiatus for another week."

Gradual recovery is sustainable. Sudden recovery exhausts you again in 3 days.

STEP 3 - Prioritization (what protocol is essential vs. what is a bonus):

If you have limited energy, choose what to keep:

Level 1 (Essential - never give up on this):

- ✓ Micro-verification (1.5 min out of 50, it's minimal)
- ✓ Ban on clichés (it doesn't cost anything, just announce the list)

Level 2 (Important - keep if you can):

- ✓ Classroom assessments (at least 1 per month, not 1 per week if you can't)
- ✓ "Version History" (randomly check 5 students, not all 25)

Level 3 (Bonus - if you still have energy):

- ✓ Complete protocol (tasks with all 3 methods)
- ✓ Mandatory self-assessment
- ✓ Extended Discussions after Micro-Verification

When you give up, don't give up on Level 1. You can let Level 3 "die" temporarily. **It's not failure, it's triage.**

STEP 4 - Support community (at least virtual):

If you don't have friends at school who do this, search online:

- Discussions with friends, recommended even with those who have other jobs – objective opinions matter enormously

- METEORAIT Forum (maybe a *Facebook group* "Teachers who apply METEORAIT")

- A single trusted colleague - not from your school, maybe from another school - who you talk to once a month

You don't need a big community. You just need one person to tell you, "It's hard, but it's worth it. You're not alone."

STEP 5 - Scheduled Breaks (controlled yielding vs chaotic yielding):

Instead of giving up when you can't do it anymore, schedule breaks:

Realistic example:

1. Week 1-3: Protocols applied 100%

2. Week 4: " Recovery "week" - protocols applied 50%, you take a break

3. Week 5-7: 100% Protocols

Or:

1. Quarter 1: Protocols applied 100%

2. Vacation: Zero thinking about protocols

3. Quarter 2: Protocols applied 100%

A scheduled break is not a breakdown. It's maintenance. The car doesn't go to the MOT/Vehicle Inspection because it's broken, but because it needs to be done preventively.

3.6.5 WEEKLY SELF-DIAGNOSTICS

(10 minutes Sunday evening)

Take a piece of paper. Write 3 questions. Answer honestly:

1. What did I apply this week from the protocols? Not what I "should", but what I **actually applied**.

2. What did I skip/compromise? No self-flagellation. Just the list.

3. Next week: What is that ONE thing I can take back/improve on? Not 5 things. **ONE**.

Realistic example:

"1. I applied: Micro-Verification to 2 classes out of 5. I banned clichés. 2. I skipped: In-class assessments (I gave homework). I did not verify "Version History". 3. Next week: Resumed classroom assessments in one class."

After 10 minutes, you close the page. You don't think about it until next Sunday. Obsession is the enemy of consistency.

3.6.6 WHEN TO GIVE UP COMPLETELY

Not everything worth starting is worth continuing. There are situations where giving up is rational, not capitulation:

Situation 1 - The system is actively sabotaging you:

If the principal explicitly tells you: "Stop these methods or I'll move you to another class / give you a negative evaluation", and you have a choice between protocol and a job, choose the job. You're not a martyr. You're a teacher.

You do what you can within the limits allowed: maybe you can't apply Flipped Classroom 2.0, but you can apply Micro-checking subtly. You may not be able to give up homework, but you can ask control questions.

Active sabotage = you adjust, you don't abandon completely, but you don't sacrifice your career.

Situation 2 - Personal cost becomes unsustainable:

If after 6 months of consistent application you notice that:

- You have constant anxiety.
- Personal relationships suffer (family, friends)
- Physical health declines (insomnia, recurring illnesses)
- You no longer feel any satisfaction in teaching.

Then stop. No protocol is worth the price of your mental health. It's not failure. It's self-preservation.

Situation 3 - Zero measurable impact after 1 year:

If after a full year of consistent application, you see no improvement - neither in the students (they don't think more clearly, they don't explain better), nor in you (you're no longer sure that you're assessing realistically), nor in the system (no external validation) - then perhaps the protocols don't work in your specific context.

Not all methods work everywhere. Maybe your students have different needs. Maybe your system is too rigid. Don't be stubborn on principle.

How to quit honestly (without hypocrisy):

If you decide to drop out, tell the students/parents:

"I tried a new method this year, based on research on AI and learning. After X months, I noticed that [the results are not what I expected / the cost is too high / the system does not allow it]. From now on, I'm going back to more traditional methods. Thanks for your patience."

Don't pretend that "the methods worked perfectly and now we're moving on." Recognize the limit. That's maturity, not failure.

3.6.7 MICRO-VICTORY

(How not to forget why you started)

When you're in the middle of fatigue, you forget why you started. It helps a lot to have a journal of micro-victories. Not dramatic, not daily. Just when you notice something.

Real examples of what to note:

"Week 3: Andrei, who usually answers 'I don't know' instantly, today he thought for 15 seconds and then tried an answer. Wrong, but he tried."

"Month 2: Maria, who always wrote 'perfect' texts (AI), today handed in an essay with visible erasures and said 'I know it's not perfect, but it's mine'. I felt something."

"Month 4: Parent who was complaining in October that 'child's grades are lower' emailed me: 'I've noticed that [Student Name] is explaining things more clearly at home. Maybe you're right.'"

These are the fuel when you want to give in. You reread them and remember: it's not in vain.

3.6.8 REALISTIC EXPECTATIONS

(What you can control and what you can't)

You can control:

- Whether to apply Micro-verification or not
- If you check "Version History" or not
- If you are assessing in class or at home
- Whether to ban clichés or not
- Your methodological integrity (are you doing what you said you were doing?)

- Your reasonable consistency (you apply when you can, you admit when you can't)
- Accepting your limits (don't pretend you can do more than you actually can)

You cannot control:

- Whether students like you or hate you
- Whether most students go to L3 or not
- Whether your parents support you or complain
- Whether your colleagues respect you or isolate you
- If the manager promotes you or ignores you
- If the Superintendent understands or penalizes you
- If the education system changes overnight
- If AI disappears or becomes more dangerous

When you feel overwhelmed, read the list above. Let go of what you can't control. Focus on what you can.

3.6.9 PLAN B

(If you give up, at least don't give up completely)

If you've decided that you can't apply the protocols 100%, there is a "Plan B" - the minimalist version that's better than nothing:

The minimalist version (15 minutes of extra effort per week):

You keep:

1. Banning 3 clichés (zero effort, just ads)
2. Micro-check 1x per week (not daily), 3 students = 3 minutes
3. At least 1 assessment per month in the classroom (not all)

Temporarily give up:

1. "Version" History "systematic"
2. Mandatory self-assessment
3. Flipped Radical Classroom 2.0

Is the minimalist version perfect? No. Is it better than zero? Absolutely. Is it sustainable when you're exhausted? Yes.

Golden rule: "The minimalist version applied consistently beats the maximalist version applied for 2 weeks and then abandoned."

PART III – TOOLKIT

This section contains resources that you can use directly, without major modifications. They are designed to be:

Printable - you can print and display or share

Adaptable - you can change the name, discipline, details

Tested - the structure is designed for real use, not theoretical

You don't have to use them all. Choose what resonates with your situation. If you only use the FCPT Checklist and the L3 Manifesto, that's more than maybe 90% of teachers do.

RESOURCE 1: FCPT Diagnostic Checklist

(A4 format, printable, for personal use or discussion with colleagues)

DETECTION OF FCPT IN STUDENTS

*False Transfer of Cognitive Power - when the student **thinks they know**, but they have only witnessed*

Instructions: Think about a specific student. Check the behaviors you frequently observe. 7-8 or more ticks = high risk of FCPT.

SECTION A - Fluency without substance

[...] The student responds quickly and fluently to general questions, but gets stuck when you ask "Why?" or "How did you get here?"

[...] The written works are stylistically impeccable (advanced vocabulary, perfect structure, zero mistakes), but the student cannot explain his own arguments when asked orally.

[...] The sophisticated vocabulary from homework never appears in spontaneous conversations or class discussions.

[...] When you interrupt him with a side question during an explanation, he completely loses the thread and can't come back.

SECTION B - Dependence on external support

[...] Can't start a task without "quickly checking something" on the phone or asking a colleague (euphemism for AI/Google).

[...] Always asks for "an example" before trying it himself, even for simple tasks that he has theoretically done before.

[...] On tests or assessments without internet access, performance drops dramatically compared to homework (difference of 3-4 points or more).

[...] Shows visible panic or agitation when the phone is not available or when they have to work completely independently.

SECTION C - Lack of Metacognition

[...] He doesn't know how to say "I'm not sure" or "I don't know" - he either remains completely silent or tries to feign using generic formulas.

[...] He cannot realistically estimate how long a task will take him (says "5 minutes" for anything from a simple exercise to a complex essay).

[...] Doesn't identify errors in his own work when you show it to him after a few days (doesn't remember the thought process).

[...] When something is wrong in its solution, it doesn't understand WHY it's wrong, even if you explicitly show it the error.

SECTION D - Asymmetric Performance

[...] Big difference between homework (9-10) and oral quizzes (5-6) or written tests in class (5-6).

[...] Big difference between written communication (excellent) and oral communication (confused, hesitant).

[...] The technical/procedural part is perfect (formulas applied correctly, algorithms followed), but the conceptual part is empty (he doesn't understand WHY it works).

Interpretation:

0-3 ticks: Student appears to be autonomous. Monitor however - FCPT may begin subtly.

~ 4-7 ticks: Moderate risk. Student has areas of dependency. Apply Micro-checking selectively on those areas.

Over 8 ticks: Major risk of FCPT. Student likely delegates thinking systematically. Urgent intervention: private discussion, intensified protocols, possible discussion with parents.

What do you do after diagnosis:

You don't blame the student. You don't make the diagnosis public. You use the information to adapt the assessment and provide targeted support. FCPT is not moral guilt, it's adaptation to the environment. **The environment must be changed.**

RESOURCE 2: "WHO ARE YOU?" Poster

(A3 format, color, permanently displayed in the classroom)

WHO ARE YOU IN THE AI ERA?

Three strategies. Three destinies.

L1 – THE PASSENGER

Strategy: Full Delegation

What it does: Gives the prompt, gets the answer, sends the assignment. AI does 80-90% of the work. The student just approves and “makes cosmetic adjustments.”

How it feels: Efficient, fast, comfortable. "Why sit for 2 hours when I can finish in 5 minutes?"

Reality in 2 years: Can no longer function without AI. In exams, interviews, real-life situations without assistance - cognitive paralysis. Becomes the easiest to replace.

Signs that YOU are here: Can't explain what you wrote. Panic when the AI is not available. Your homework is "too perfect" compared to what you can do on the oral exam.

L2 – THE OPERATOR

Strategy: Partial Delegation

What it does: Uses AI to check, structure, generate variants. It delivers results, but it has lost its intuition. It can no longer detect when the AI is wrong.

How it feels: Productive, modern, adaptable. "I use technology intelligently."

Reality in 2-3 years: Competent in standard tasks, stuck in new tasks. Can operate AI, but cannot critically evaluate output. Vulnerable when context changes.

Signs that YOU are here: You can explain what you did, but not why. When AI gives you two options, you don't know which is better without asking someone else.

L3 – THE ARCHITECT

Strategy: Conscious Symbiosis

What it does: Uses AI to amplify what they already know, not compensate for what they don't know. AI does the mechanical work, the student retains conceptual control and the final decision.

How it feels: Powerful, autonomous, in control. "AI is my tool, not my prosthesis."

Reality in 2 years: Tens of times more capable than L1. Can operate with or without AI. Hard to replace. The only sustainable strategy in the long term.

Signs that YOU are here: You can reconstruct everything you did without the AI. You can explain why you rejected the solutions the AI proposed. You feel "cognitive shame" asking the AI trivial things - it forces you to think first.

QUESTION OF THE DAY:

The last assignment you did - if someone asked you to redo it completely, without any help, how long would it take you to finish it? To the same quality?

- If the answer is "at the same time" or "a little slower" → you are probably L3.

- If the answer is "in double time, but ok" → you are probably L2.

- If the answer is "I couldn't" or "much weaker" → you are probably L1.

It's not judgment. It's reality. And reality can change. Read and use the tools in **METEORAIT FOR TEENS** (www.meteorait.eu).

RESOURCE 3: Anti-AI Theme Template

Template 1 - MATH & SCIENCES (Mathematics/Physics)

Topic title: [General topic - ex: "Pythagoras' Theorem"]

LAYER 1 - Informational (AI can solve, 20% of the grade):

Summarize the Pythagorean theorem in 50 words or less. Write the formula and explain what each element means.

LAYER 2 - Locally applied (AI has no local data, 30% of the grade):

Find a situation in your home, schoolyard, or neighborhood where the Pythagorean theorem would help you calculate something you can't measure directly. Describe the situation specifically (what object, what distance, what angle) and explain the calculation.

LAYER 3 - Personal (AI cannot simulate, 50% of the grade):

Have you tried the calculation in practice? If so, what was the difference between the calculation and the actual measurement (if you were able to measure)? Why do you think the difference occurred?

If you haven't tried, honestly explain why not (what stopped you, what you were too lazy to do, why you didn't have time). It's not wrong to not have tried - I just want to understand your thought process.

BONUS (optional, +1 point):

On a separate sheet of paper, write down 2 questions you asked yourself while doing your homework, but didn't know how to answer or couldn't find the answer.

Forbidden clichés (each occurrence = -1 point): "In conclusion", "Thus", "It is important to mention", "On the one hand... on the other hand"

Template 2 - HUMANITIES (Native Language / Literature)

Topic title: [General topic - ex: "Characterization of character X from novel Y"]

LAYER 1 - Informational (AI can solve, 20% of the grade):

Describe in 80-100 words the main traits of character X. Use at least 2 quotes from the text as evidence.

LAYER 2 - Local comparison (AI does not know your context, 30% of the grade):

Compare character X to a person you see often in real life (not a celebrity - it could be a family member, a neighbor, a store clerk, the bus driver you take every day). Describe a specific situation in which character X would react similarly or differently to how the person in your life reacts.

Example: "Character X, when confronted with injustice, reacts violently. Mrs. Maria from the store, when a customer is rude, reacts exactly the opposite - she becomes even more polite, but cold. I think the difference comes from..."

LAYER 3 - Personal (AI cannot simulate genuine emotion, 50% of the grade):

How would you react in character X's situation (choose a specific scene from the novel)? Not what you "should" do or what is "morally correct", but what you honestly believe you would do in reality. If you are not sure, explain why you cannot decide.

BONUS (optional, +1 point):

What argument against your interpretation (about the character or how you would react) do you find the strongest? I mean, what could make you change your mind?

Forbidden clichés (each occurrence = -1 point): "Throughout the novel", "In contemporary society", "The character is", "In conclusion", etc.

Template 3 - HUMANITIES (History/Social Sciences)

Topic title: [General topic - ex: "Causes of the Revolution of 1848"]

LAYER 1 - Informational (AI can solve, 20% of the grade):

Summarize in 100 words the 3 most important causes of the Revolution of 1848. Use at least 2 sources (textbook + one more source of your choice).

LAYER 2 - Interpretive (AI generates generic, 30% of the grade):

Of the 3 causes you mentioned, which do you think, if they had been missing, the revolution would not have happened at all? Or do you think they were all necessary simultaneously? Argue.

Identify a cause that the teacher did NOT mention in class or that the textbook treats superficially (maximum one paragraph). Explain why you think it deserves more attention.

LAYER 3 - Personal (AI cannot simulate real biography, 50% of the grade):

Interview a family member (parent, grandparent, uncle) about a historical event that they experienced firsthand or about which they have a strong opinion. Describe: who the person is, what historical event, what they said (summarize in 3-5 sentences), what surprised you about what they said.

Then: if this person had lived in 1848, do you think they would have supported the revolution or been against it? Why (based on the values you observed in the interview)?

BONUS (optional, +1 point):

Find a contradiction in your position: an argument or because that weakens what you argued above. You don't need to resolve the contradiction - just identify it.

Forbidden clichés (each occurrence = -1 point): "Throughout history", "Since ancient times", "First of all, secondly", "Of course"

RESOURCE 4: Rapid Assessment Grids

(Traffic Light System - A4 format, 2 grids per page)

PURPOSE: Rapid triage. Do not calculate points if not necessary.

GOLDEN RULE: Start with **RED**. If you check **RED**, you stop. Don't read the rest. The paper is rejected or requires immediate Micro-Oral Check. Don't waste your time correcting an AI-generated paper.

HOW TO USE THESE GRIDS

1. **Scanning (5 seconds):** Look at the sheet from a distance. Is it "too clean"? Is it "too structured"? **Suspicion of Red.**
2. **Cliché Test (10 seconds):** Quickly read the first and last sentences. Does it start with "In modern society..." and end with "In conclusion..."? **Straight Red.**
3. **Scar Test (10 seconds):** Look for the cut mistake. Is there no cut mistake on the entire sheet? **Suspect Red/Yellow.**
4. **The score:**




If it is **Green**, it gives the maximum possible score for the level of correctness.

If it's **Red**, just write on the paper: " **Come and explain this to me orally.**" (Don't grade it yet).

This method reduces proofreading time by 70% by eliminating time wasted reading AI-generated texts.




1. QUICK GRID - MATH & SCIENCES
(Mathematics / Physics / Info)

Student Name: _____ Date: _____

TRAFFIC LIGHTS	VISUAL INDICATORS (check what you see in the first 10 seconds)	ACTION / SCORE
 RED <i>(AI / Copied)</i>	<ul style="list-style-type: none"> - Correct final result, but zero intermediate steps. - "Alien" method (uses formulas not yet taught). - Suspiciously clean sheet (no erasures, robotic writing). 	<p>STOP. Don't correct. Score: 1-4 (or invite to Micro-verification).</p>
 YELLOW <i>(Uncertain)</i>	<ul style="list-style-type: none"> - Correct standard solution, logical steps. - Written evenly, without visible hesitations. - It seems "too bookish". 	<p>CHECK. Read carefully. Score: 5-8 (depending on correctness).</p>
 GREEN <i>(Human thinking)</i>	<ul style="list-style-type: none"> - Erasures, cuts, corrections (traces of the struggle with the problem). - Alternative methods tried (even if wrong). - Explanations in your own words in the margin. 	<p>BONUS. Reward effort. Score: 9-10 (even with small calculation errors).</p>

2. QUICK GRID - HUMANITIES (Native Language / Foreign languages / History)

Student Name: _____ Date: _____

TRAFFIC LIGHTS	VISUAL INDICATORS (check what you see in the first 10 seconds)	ACTION / SCORE
 RED <i>("AI Voice")</i>	<ul style="list-style-type: none"> - AI clichés: "In conclusion", "On the one hand", etc. - Perfect grammar, but zero substance (empty sentences). - Suspicious length (exactly 500 words, 5 fixed paragraph structure). 	<p>STOP. Don't read any further. Score: 1-4 (Mandatory retake).</p>
 YELLOW <i>(Operator)</i>	<ul style="list-style-type: none"> - Correct, but boring. - Good information, but no personal opinion. - Standard, safe structure. 	<p>CHECK. Look for an original idea. Score: 5-8.</p>
 GREEN <i>(Own voice)</i>	<ul style="list-style-type: none"> - Local/personal examples (The lady at the store, the grandfather). - Vulnerability ("I'm not sure, but I think..."). - Imperfect style (long/short sentences, human rhythm, passion). 	<p>BONUS. Reward your "own voice." Score: 9-10.</p>

RESOURCE 5: Email Templates

EMAIL 1 - REPLY TO PARENT (Smaller Note)

Subject: Re: Note on [topic name]

Dear [Parent Name],

Thank you for your email. I understand your concern regarding [student name]'s grade on a recent assignment.

Let me clarify what has changed in my evaluation method since [month]:

Before: Students submit homework. I correct and grade the final product.

Problem: I cannot verify with certainty how much of the assignment was worked on independently and how much with AI assistance.

Now: I evaluate 50% the final product (quality of the answer) and 50% the visible process (how the student got there - time invested, attempts, corrections, explanations).

What does this mean for [student name]:

The assignment had a very good final product (Tg grade: [X]/50), but the process was almost invisible - "clean" text, no errors, no visible alternative attempts, very short work time according to "Version History".

The final grade reflects both components: $[(Tg + Tb) / 10]$.

Why I do this:

According to recent research on the impact of AI on learning, constant delegation of thinking leads to progressive cognitive atrophy. I don't want [student's name] to have artificial grades now and discover in 3-5 years, on a major exam or in a professional context, that the foundation is fragile.

What we can do together:

I would appreciate discussing how [name] can improve his/her work process - not for higher grades, but for real learning. I am available [days/hours] for a meeting.

Respectfully,

[Your name]

[Discipline]

EMAIL 2 - INITIAL ANNOUNCEMENT TO PARENTS (beginning of the school year)

Subject: New evaluation method - [Subject] - Class [X]

Dear Parents,
Starting on [date], I will implement a new assessment method in class [X], in [subject].

Context:

AI tools (ChatGPT, Gemini, Claude, etc.) are now available for free to all students. They can generate assignments, solve problems, and write essays in seconds. The reality is that I can't stop students from using them at home, and it wouldn't be productive to try.

What is changing:

At home, students can use AI freely for preparation (to understand concepts, practice, check).

At school, the assessment is done independently, without access to AI/internet/phone.

The final grade will reflect 50% the product (quality of the answer) and 50% the process (how the student thought).

Why I do this:

I want to assess what your child can do independently, not what they can do with assistance. The difference is crucial for long-term readiness.

What can you do:

Encourage [student name] to use AI to learn (ask for explanations, check logic), not to avoid thinking (copy answers).

If you notice that [name] spends very little time on homework (under 20-30 minutes), there may be a problem.

Questions/feedback:

If you have any questions or concerns, please contact me. The method is new and I appreciate constructive feedback.

Respectfully,
[Your name]

EMAIL 3 - TO THE DIRECTOR

Subject: Report on evaluation methods - [Discipline]

Dear Management,

I understand that you have received feedback from some parents regarding my assessment methods in class [X]. I appreciate you giving me the opportunity to clarify before making any decisions.

Context:

We implemented an assessment system in [month] based on recent research on the impact of AI on learning (Stan, 2025, available on SSRN). These are not personal or unfounded experimental methods, but the application of protocols recommended by specialists in education and cognitive psychology.

What I did specifically:

- Evaluation 50% on product (quality of response) + 50% on process (time invested, visible attempts, explanations provided)
- Weekly Micro-Check (3 students, 1 question, 30 seconds) to check for real understanding
- Homework done in class for final assessment, not at home (where I can't control the influence of AI)

Observable data after [X weeks]:

- [Y]% of students show improvement in oral explanation ability
- Average independent work time increased from [X] to [Y] minutes
- Complaints come from approximately [Z]% of parents - mostly those whose children had artificial grades before

Proposal:

I am willing to present a session on these methods to the Faculty Council (30-45 min). If there is institutional resistance after a full presentation of the data and methodology, I respect the school's decision.

I only ask that the decision be made after objective evaluation of the method, not just based on emotional feedback from parents who are uncomfortable with the increased standards.

I remain available for any clarifications.

Respectfully,
[Your name]

EMAIL 4 - TO COLLEAGUES

Subject: Experimenting with new evaluation methods - anyone interested?

Hello colleagues,

I've started testing some new assessment methods in my classes, inspired by recent research on AI and learning. I don't claim to have found the perfect solution, but the early results look promising.

What I do differently:

- I also partially evaluate the "process" (how the student thinks), not just the final product
- I use "Micro-Checking" - 3 random students, 1 short question, to see if I understand what they wrote
- Assignments assessed in class, not at home (to eliminate uncertainty about the influence of AI)

Why I'm sharing this: If anyone is interested in experimenting together or discussing what works/what doesn't, I'd appreciate it. I'm not trying to "convert" anyone - I respect that everyone has their own methods. But if any of my colleagues feel the same frustration with "too perfect" homework and want to try something different, let's help each other out.

Resources: I have some homework templates and assessment grids that I made. If anyone wants them, I'm happy to send them (no obligation to use them).

Coffee/chat when you have time?

[Your name]

PART IV - EPILOGUE

WHERE WE ARE

We started from a harsh premise: classic assessment is "history." Not because teachers were wrong, but because reality has changed faster than our measurement systems. When a student can generate a perfect assignment in 2 minutes and there is no reliable way to detect it, the construct of "homework" collapses.

I have tried to build into this guide not a perfect solution, but a set of realistic protocols for a real, tired, isolated teacher who wants to do the right thing but doesn't have infinite energy. It is not a utopian manifesto about how education should be. It is a guerrilla manual for how to survive and stay honest in a system that no longer works by the old rules.

We combined three axes: the student's age (10-14 and 14-18 years old), the type of discipline (Sciences / Humanities), and the level of effort you can sustain (full protocol & minimalist version).

WHAT THIS GUIDE CANNOT DO

This guide does not save the education system. It does not transform all schools overnight. It does not guarantee that all your students will become L3. It does not solve your problems with the principal who does not understand, with the inspector who demands "efficiency", with the parents who only want "high grades".

This guide does not give you superpowers. It does not take away your fatigue. It does not eliminate your 40-50 hours a week of real work. It does not make you immune to fatigue and exhaustion. It does not guarantee that you will succeed or that your effort will be recognized.

This guide cannot tell you „If you do exactly this, you are guaranteed success". Because there is no such thing. Education is NOT a first-degree equation (you put in x, you take out y), but a complex system.

The guide is not even complete. It lacks protocols for special situations (students with ADHD, anxiety, neuro-divergence). It lacks extensive empirical data (the theories behind the guide are new and long-term validation does not yet exist). It lacks the community of practice that should exist around these ideas, but that we want to build together.

WHAT THIS GUIDE CAN DO

It can give you clarity. When a student is turning in a perfect assignment and you feel like "something is wrong" but you don't have the words for it - now you have: **FCPT**. When you notice that some students are growing exponentially and others are stagnating but you don't understand the mechanism - now you have: **L1/L2/L3 Cognitive Divergence**. Clarity doesn't solve the problem, but it helps you not to go crazy.

It can give you concrete tools. You don't have to reinvent the wheel. You have the FCPT Checklist. You have the Micro-verification. You have Anti-AI homework templates. You have the Tb+Tg Evaluation Grids. You have email templates for parents / principals / colleagues. They are not perfect, but they are logically tested and can be quickly adapted to your situation.

It can give you permission to let go of what no longer works. Does the system force you to give X number of assignments per term? Okay, give them, but don't grade them there. Do your parents demand high grades? Okay, explain to them why the current grade is real and the old one was fake, but don't give in to the pressure. Do your peers judge you? Let them, you have data / argument, they just have inertia.

It can validate your intuition. If you already felt that "something is wrong" with perfect homework, that "students know too little about what they are teaching", that "the system rewards bluffing" - you were not paranoid. You were an observer. Now you have a theoretical framework that confirms your observation and gives you an answer.

It can protect you institutionally. When a parent complains or pressure comes from the principal, don't defend yourself with "I think..." but with "according to the literature on FCPT, the protocol I'm applying is recommended for..." It's not arrogance, it's armor. The difference between being seen as "the teacher who complicates" and "the teacher who applies research-based standards" is enormous.

It can give you a plan for coming back when you give in. Because you probably will give in at some point. And when you give in, it won't be the end. It will be a break. And after the break, you have a fail -safe protocol: Micro-Return, Prioritization Levels 1-2-3, Supportive Community, Scheduled Breaks. You're not a failure if you give in. You're a failure if you give in and lie to yourself that you didn't give in.

THE LAST WORD

One of the main conclusions of “METEORAIT” is that “**Adulthood is a Process, not a Person.**” And the Process is born from **Questions** (“*Rogo, ergo emergo*” – *I ask, therefore I become*).

METEORAIT FOR EDUCATORS is not against AI. It is against **relying on AI** without a solid cognitive foundation. You can't be a good “*Prompt Engineer*” if you don't understand the material you're asking the AI to process. You can't detect when AI is wrong if you don't know the correct answer yourself. Amplification comes AFTER competence, not instead of it.

Children are "set" to " **here and now** " mode. **The prefrontal is immature** - the brain's control center, responsible for planning, impulse control and long-term vision, is fully developed only around the age of 25. The **limbic system dominates** - in children, the part of the brain responsible for emotions and instant gratification is much more active than the rational part. **Stanford Marshmallow Test** - the famous Stanford studies have shown how children have real difficulties in delaying reward, and those who manage to wait tend to be more successful in adulthood (but the skill is trained over time). **The concept of time** - for a 5-year-old child, "in a week" is an abstract eternity, they live in a continuous present, which is why the reward (including the dopamine "for completing the homework") of 5 minutes later is more valuable than a huge one tomorrow (a grade, for example) or in the adult future. **In short:** it's not bad will, it's just "hardware" that doesn't yet support strategic planning " software".

So perhaps the most important thing you can do is **be consistent** in your actions over time. If you're thinking, "It's too much, I can't do it", you're probably right. It's probably a lot. And maybe you can't do everything all the time. But maybe you can do something **consistently**.

If you just do the Micro-Check once a week (2-3 minutes out of 50), without anything else from this guide, you have done more than maybe 90% of teachers in the current system. If you ban just 3 AI clichés, without changing anything else, you have raised the bar for those 25-30 students. If you only do one assessment per month in the classroom, not at home, you have a sample of reality in the middle of the “ ocean of illusions”.

You don't have to be a hero. You don't have to save the system. You just have to be honest in your class, with your students, with the tools you have. And if out of the 25-30 students you have in your class, even 5-10 end up being L3 instead of L1, you've changed something.

If you change the destiny of just one child by what you do or say, it's like you've lived another life. You probably won't know who you changed. Or maybe you'll get confirmation in 10 years, or maybe never. The absence of feedback is not the absence of **impact**.

You are in the classroom. You are the daily witness to the difference between **learning** and **simulating learning**. The protocols in this guide are just tools. Use them when you can. Let them go when you can't. And come back to them when you're ready. Don't judge yourself. Don't compare yourself to an ideal version of a teacher that doesn't exist. Compare yourself to yourself 6 months ago. If you have even one clearer conviction, one more tool, one less failure - you've made progress.

Ultimately, education is not about AI or anti-AI. It's about the ability to **think critically**, to resist frustration, to learn from mistakes, to remain curious when the answer is a click away. It's about **choosing friction when comfort is easier**. It's about being brave enough to admit "I don't know" and persistent enough to search until you know.

This book was also written with the help of AIs. More AI models, more interactions, using information from more sources (for additional context/understanding). I am a simple engineer, and even though I graduated from the Teacher Training Program postgraduate course 20 years ago, what I wrote in this book is about today's reality, about the exponential development curve of AI and **the impact on present and future human society**. AI arrived in our world, each of us, exactly like a **meteorite**. It did not ask or ask for permission, and it cannot be deflected - we can only try not to become fossils (like dinosaurs) and to adapt (like mammals).

For you, as an educator, I think the best meaning of *Rogo, ergo emergo*. is: **(When) the teacher asks, the student becomes.**

Thank you for reading this far, **to the end**. With **great respect**,
Adi Stan.