LIF PILOT COHORT

ROUND 1 INSIGHTS

What happened when teachers applied the
Lesson Intelligence Framework into their classrooms.

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I - INTRODUCTION

Seven teachers from four countries in six school contexts. None of them had used the Lesson Intelligence Framework in a classroom before April 2026. I wanted to find out what would happen when they implement LIF into practice.

The cohort taught 4-year-olds comparing numbers in Hefei. Grade 11 students analysing propaganda posters in Guangzhou. Indonesian high schoolers stepping inside the moral perspective of drama characters in Surakarta. Year 4 readers going beyond literal comprehension at a Beijing international school. IB Economics students diagnosing supply-side policies through a three-framework architecture, also in Beijing.

The brief was small. Teach two lessons with LIF in your plan. Reflect honestly on what you saw. Tell me what changed and what didn't. This process was followed by my direct feedback and support at each step. Honest observation was the assignment, and the foundation of this document.

It opens with a quick orientation to LIF, an introduction to the pilot cohort, then moves into findings organised by layer, one featured case study, observations on what changed in teachers' practice, the teachers' own voices, and a conclusion.

This was the core insights:

Students can think deeper than their teachers assume. The conditions for that thinking have to be designed deliberately, and LIF gave these teachers a way to design them.

II - LESSON INTELLIGENCE FRAMEWORK

I built the Lesson Intelligence Framework to put student thinking at the centre of lesson design. LIF is a design architecture with five layers. Each layer names a design problem teachers face when they plan a lesson where thinking has to happen.

Layer	Name	Design Question
L1	**Thinking Intent**	What type of thinking do I actually want to happen in this lesson?
L2	**Cognitive Load Control**	What cognitive noise can I remove so students can do the real thinking?
L3	**Thinking Activation**	How do I ensure students engage in genuine thinking?
L4	**Thinking Visibility**	What artefact/procedure will show me what students are actually thinking?
L5	**Intervention Intelligence**	When do I step in, and when do I hold back?

The layers work together but do not need to be applied sequentially or in isolation. Experienced practitioners often find multiple layers operating simultaneously inside a single lesson activity. The framework offers teachers a vocabulary for the design decisions they are already making and a structure that makes those decisions visible.

Each layer is grounded in established learning science:

- **Layer 1** reflects cognitive transfer research: vague learning goals push students toward surface strategies that do not produce durable understanding.
- **Layer 2** draws on Cognitive Load Theory (Sweller): learning stalls when instructional demands exceed what working memory can hold.

- **Layer 3** draws on generative learning theory (Wittrock): students build durable understanding only when they do the cognitive work of constructing meaning themselves.
- **Layer 4** draws on formative assessment research (Black and Wiliam): a teacher's ability to elicit and observe student thinking is the precondition for any meaningful instructional response.
- **Layer 5** builds on feedback effectiveness research: specific, timely teacher responses to visible thinking is among the highest-leverage moves in any lesson.

III - THE PROGRAM

Round 1 ran over six weeks.

- **Week 1:** Planning for Case 1
- **Week 2:** Submission and individual feedback
- **Week 3:** Planning for Case 2
- **Week 4:** Submission and individual feedback
- **Week 5:** Final reflections
- **Week 6:** Synthesis and write-up

The structure was small on purpose. Two lessons, two reflection cycles and two rounds of individual feedback. All teachers in the cohort were carrying full teaching loads, so the program was built to make space for the work of applying LIF without competing with it.

I read every submission and provided individual feedback to every teacher after Case 1 and Case 2. That feedback was the most resource-intensive part of the program. The responses below suggest it was also the part teachers valued.

> *"The individual email feedback from Damir after Case 1 was the most valuable communication in the programme. It was specific, it responded to what I actually submitted, and it pushed the thinking forward rather than confirming it. That quality of exchange is difficult to scale, but it is what distinguished this pilot from a self-directed reading programme."*
>
> *— William Widjaja, IB Economics HL, RDFZ ICC Beijing*

> *"The weekly emails were very useful and felt appropriately timed. They helped maintain reflection, motivation, and connection throughout the pilot process, while the feedback made the project feel more meaningful and personally engaging."*
>
> *— Frederique Lemesle, French Lit, UISG Guangzhou*

IV - FINDINGS BY LIF LAYER

I organised the findings by layer because that is how the cohort experienced LIF in practice. Each layer generated its own observations: moments where the design held, moments where it stretched, and moments where it revealed something neither the teacher nor I had anticipated.

LAYER 1 THINKING INTENT

The simplest layer to understand and the hardest to make specific. Teachers consistently reported that naming the intended thinking type before planning the task changed the quality of every subsequent design decision.

William identified it as *"a small planning shift with a disproportionately large classroom effect."* He described Layer 1 as forcing a distinction he had not previously made explicit: the difference between what students will produce and

what they will need to think in order to produce it. Once that distinction was visible in his planning, the lesson's instructional sequence became significantly easier to design.

Mika applied Layer 1 explicitly in Case 2 by co-constructing success criteria with her K2 students before the lesson began. Students who understood the learning intention, "comparing and justifying," used mathematical language more consistently throughout the session. The clarity of intent functioned as a self-regulation scaffold.

> *"My coordinator specifically noticed how I was asking more intentional questions and using IB language more consistently in my teaching. I shared with her that I have been part of this LIF cohort."*
>
> *— Mika Allicer*

Frederique's Case 1 surfaced one of the most striking Layer 1 observations in the entire pilot. She designed an opening prompt that asked students to write a one-sentence claim before any discussion. They spent a full ten minutes on it. The ten minutes were the work itself, and they felt it mattered to get it right. Even when told they could refine their claim later, the act of formulating an initial committed position held them in serious cognitive work before the lesson formally began.

What Frederique surfaced reframed how I think about Layer 1. Formulating the initial claim is itself a high-cognitive task. Naming the thinking type in a lesson plan is the start of Layer 1. The full design move is engineering the first task so students have to do that thinking from the opening moment.

LAYER 2 COGNITIVE LOAD CONTROL

Layer 2 attracted the least direct commentary in teacher reflections, and that fits how it works. When cognitive load is well-controlled, students think about the right

things, and teachers see few signs of confusion or overwhelm. The layer is most visible when it is failing.

William sequenced his six-period unit by introducing one policy type per step before increasing complexity. He provided the provocation before the definition, allowing students to form a hypothesis before they had the technical vocabulary to express it precisely. This sequencing is textbook Cognitive Load Control: build schema in the order it will be needed.

Frederique prepared curated materials in advance: worked examples from prior lessons, a terminology reference in OneNote, a deliberately small group size. Each source of cognitive noise was removed before the lesson began, so students could give their attention to the analysis itself.

Mika used manipulatives across the lesson: loose parts, number lines, visual models that made abstract comparison tangible. For four-year-olds, concrete materials are the primary mechanism for cognitive load control. When Layer 2 was working across the cohort, students engaged more deeply with Layers 3 and 4.

LAYER 3 THINKING ACTIVATION

Layer 3 was the highest-leverage entry point in Round 1. Three teachers in the cohort identified Thinking Activation as their primary focus. The payoff was visible within a single lesson. The hardest part was the same for every teacher: holding back.

The instinct to rescue students from productive struggle is strong. Teachers are trained to notice discomfort and respond to it. LIF reframes that instinct: when you feel the urge to step in because students are struggling to formulate their thinking, that discomfort is a sign Layer 3 is doing its job. The struggle is the point.

> *"Holding back the diagram felt natural once I reframed it as a deliberate L3 design decision rather than withholding help. Having the LIF layer named in my plan gave me a principled reason not to intervene early." — William Widjaja*

William reframed the act of withholding his most powerful teaching tool, the economic diagram, as a deliberate Layer 3 design decision. His students sorted policies incorrectly in Round 1, which was exactly the productive disruption he designed for. In Round 2 they used their own constructed logic. The textbook definitions came in afterward, confirming what they had already worked out. Transfer happened faster than predicted because the first-attempt thinking had been their own.

Ary took deliberate non-intervention even further in Case 2. In the space that opened up, students became more reflective. Some reread dialogue carefully, paused, and revised their ideas independently. Thinking quality correlated directly with performance quality: students who produced the most thoughtful written reflections gave the most convincing performances.

Nicholas captured the core Layer 3 principle in a single sentence: *"Sometimes it is best to give children the opportunity to think than intervening."* He held back, and students who would ordinarily expect him to call on them at random began raising their hands voluntarily.

What the cohort taught me about Layer 3 was about implementation. The reason to hold back has to be built into the plan itself. When the principle is named in the lesson plan, the teacher has already made the decision before the moment that tests it.

LAYER 4 THINKING VISIBILITY

Thinking Visibility produced the most surprising moments in the pilot. In every case where a teacher deliberately created a mechanism to see student thinking before intervening, what they found was different from what they had expected to see.

William used Canva for Education to collect students' written positions and sorting logic in real time, without interrupting the lesson. Students who appeared confident verbally had visibly thinner written justifications. The gap between spoken

confidence and written reasoning is exactly what Layer 4 is designed to catch. A teacher making decisions based only on verbal participation would have misread the room.

> *"Students who appeared confident verbally had visibly thinner written justifications. The gap is real, and it is invisible without a thinking visibility mechanism." — William Widjaja*

Frederique's students spontaneously applied a colour-annotation system from a previous lesson to their new task: an unprompted transfer of method. She observed it because the annotation task made the process visible. Without Layer 4, the transfer would have been undetectable.

Ary's written character reflection worksheets revealed something she had not previously seen: students separating themselves from the characters they were playing and critiquing those characters' decisions from their own moral perspective. Students playing antagonistic characters evaluated those characters from outside the role, critiquing decisions they had been performing minutes earlier. This depth of thinking would have remained invisible in a performance-only assessment.

William's most precise framework contribution came from this layer. He drew a clean distinction between Layer 3 and Layer 4. Layer 3 is a sequence decision (first attempt before support). Layer 4 is an observation decision (what artefact makes thinking visible). They are different moves, and conflating them is a common design error. Separating them in planning improved William's lesson design more than any single element of the framework. It has also changed how I write about Layer 4 going forward.

LAYER 5 INTERVENTION INTELLIGENCE

Layer 5 was the hardest layer to enact. Across the cohort, it was the most frequently flagged as difficult, the most under designed in lesson plans, and the most clearly in need of development in the framework itself.

Teachers understood the concept: step in when the thinking can no longer progress without you; hold back when productive struggle is still generating learning. The difficulty was the ten seconds a real lesson gives you to make that call.

Mika described it precisely: *"Knowing exactly when to step in and when to hold back."* The concept lives in planning. The decision lives in the moment, in the ten seconds the lesson allows. Layer 5 is a real-time decision problem, and teachers need a heuristic they can run in those ten seconds, with the principle already built into it.

What is needed is a fast, specific heuristic teachers can act on under pressure. One example from the pilot data: intervene after a visible misconception, once the student has made an attempt. Simple enough to use in the moment. Grounded enough to trust.

William's 90-Second Protocol, written without explicit Layer 5 framing, is the strongest Layer 5 heuristic candidate to emerge from Round 1. At the Build → Compare transition in his CBCE framework, students write a mechanism description without using the categorical label; a partner asks one rigorous question; only after defending the mechanism does the student apply the label. The protocol is a structured intervention triggered by the risk of a specific thinking failure, deployed at the moment of maximum cognitive vulnerability, with a defined procedure and an observable outcome.

V - FEATURED CASE STUDY

William Widjaja — The Ecosystem of Rigor

William Widjaja used LIF differently from everyone else in the cohort. He treated it as the architectural foundation for a broader instructional design system he had been building independently. In doing so, he gave me the strongest external evidence that LIF works as a meta-framework, hosting subject-specific tools inside its layers.

> *"LIF is the architecture. My other frameworks are what students build inside it." — William Widjaja*

The Problem

William's diagnosis: students are producing more and thinking less. Specifically, they jump to evaluation-level judgments without building the foundational cognitive work underneath. AI has made this acute. Polished outputs now perfectly mask the absence of real thinking. His framing: *"The cognitive demand is inverted. We push students to the top of the thinking hierarchy before the foundation is in place."*

> *"I had been precise about what students produce and in what order — but not about what thinking is required before the production begins. Applying LIF's L1 and L3 showed me a problem I had consistently misread as success: students who sorted policies correctly and wrote structured arguments, but could not explain the mechanism behind their classification."*
>
> *— William Widjaja*

The Three-Framework Architecture

Attribution throughout this case study: LIF belongs to Damir Odobasic. CBCE and CLAIM belong to William Widjaja.

Framework	Creator	Role	LIF Layer(s)
LIF	Damir Odobasic	The Architecture: thinking required, visible, guided	All 5 layers
CBCE	William Widjaja	Cognitive Sequence: enforcing thinking prerequisites	L3 (primary), L2 (secondary)
CLAIM	William Widjaja	Output Structure: evaluative thinking made visible	L4
90-Second Protocol	William Widjaja	Micro-intervention at CBCE Build → Compare	L5 candidate

CBCE: Chunk · Build · Compare · Evaluate

CBCE enforces the cognitive prerequisites for evaluative thinking. Students must Chunk (describe only, no causal claims), Build (connect to mechanism), Compare (place alongside a contrasting case), and only then Evaluate. Evaluation is the final step, earned by doing the three before it.

The core mechanism is what William calls the Blockade: the move AI enables effortlessly (jumping to evaluation) is physically prevented. Students cannot access the final step without earning it through the sequence. When a student jumps to *"Social media is bad"* at the Chunk stage, CBCE pinpoints the exact intervention point.

CLAIM: Claim · Limitation · Application · Implication · Mini-Evaluation

CLAIM structures evaluative output. Its most distinctive design decision: the Limitation step comes second in the sequence, immediately after the claim itself. Students must interrogate their own claim before going any further. The structure forces a more honest, qualified claim from the start, with self-interrogation built in as a required step.

CLAIM naturally satisfies Layer 4 (*Thinking Visibility*) because each step produces a visible trace of reasoning. It does not, by itself, guarantee Layer 3 (*Thinking Activation*). That distinction, which William worked out precisely through LIF, is what separates a well-structured output from a well-designed lesson.

The Handoff

CBCE and CLAIM operate in sequence. They hand off to each other. CBCE's Compare step forces students to distinguish cause from correlation. That distinction becomes the direct input for CLAIM's Limitation step. As William put it: *"CBCE builds the engine. CLAIM drives it."*

> *"In an era where polished outputs are instantly generated, the value of education lies entirely in the invisible friction of cognitive work. Our job is to make that friction required, visible, and guided."*
>
> *— William Widjaja*

What This Means for LIF

William's case is the strongest evidence from Round 1 that LIF functions as a meta-framework. The pilot showed me that LIF provides the architectural logic that gives other frameworks their operating context. Layers 3 and 4 are the natural extension points where subject-specific frameworks plug in, and I will name this explicitly in the next version of the framework documentation.

William's summary: *"Operating at three distinct levels, combining them creates a closed-loop system of accountability. There are no escape hatches for passive learning."*

VI - WHAT CHANGED IN PRACTICE

Across all Case 1 and Case 2 submissions, three consistent shifts appeared in how teachers were operating in the classroom by the end of Round 1.

From Explaining to Engineering

Before LIF, most teachers described their planning in terms of content delivery: what they would explain, what materials they would provide, what activities would follow. After applying LIF, reflections shifted to design: what conditions they would create, what thinking those conditions would require, what they would deliberately not do to ensure students had to do it.

Ary captured this most directly: *"LIF challenged me to redesign the kinds of questions I use in the classroom, shifting from mainly factual questions toward prompts that intentionally activate student thinking."* The change is structural. A lesson plan trained by LIF works as a design document for the thinking a lesson is meant to produce.

From Assumption to Evidence

Before Layer 4 was applied, teachers were making intervention decisions based on what students appeared to understand. After creating mechanisms to make thinking visible (written artefacts, annotation tasks, sorting activities, digital collections), teachers consistently found that the appearance of understanding and the evidence of it diverged.

This mattered most in William's classroom, where student confidence was high and thinking depth was lower than expected. But it appeared in every classroom where thinking was made externally visible. The gap between what students say and what students can show is real. Layer 4 makes it measurable.

From Instinct to Principle

The hardest move in Round 1 was the one made in the moment: deciding not to step in when students were struggling. Designing the lesson was the easier part.

LIF gave teachers a principled reason to hold back. The teacher can name it in the moment: *"This is productive struggle. This is Layer 3 doing its job."* That kind of named reason, grounded in the lesson's design, is trustworthy under classroom pressure.

By Case 2, teachers were making that call with more confidence. Mika noted that multiple LIF layers were operating simultaneously without her consciously planning for each one. The framework was being internalised, which is exactly the maturity signal I had been watching for.

VII - TEACHER VOICES

These are the teachers' own words, reproduced here because they carry something analysis cannot: the specific texture of what it felt like to teach with LIF for the first time.

Ary Yulistiana

Indonesian Language · SMKN 9 Surakarta, Indonesia

> *"Students are often capable of deeper thinking than we initially expect, especially when they are given space to reflect, interpret, and express their own perspectives without fear of judgment."*

> *"Applying LIF helped me realize that students relied less on searching for instant answers and became more willing to express their own reasoning, perspectives, and reflections."*

> *"Meaningful learning and educational collaboration can cross distances, cultures, and backgrounds. From my small city, I could connect and learn with a teacher from a big city like you."*

Mika Allicer

Inquiry / K2 (ages 4–5) · CISH, Hefei, China

> *"I was particularly surprised by how capable they are of deeper thinking when given a LIF environment that encourages exploration, discussion, and reflection."*

> *"Even without consciously planning, multiple layers of LIF can happen simultaneously. It's not just about asking questions, it's about creating an environment where students feel confident to explore, reflect, and share."*

> *"It would be helpful if teachers from similar levels, such as Early Years, could connect regularly to exchange ideas, reflect together, and learn from one another's experiences."*

William Widjaja

IB Economics HL · RDFZ ICC Haidian, Beijing, China

> *"LIF has given me a planning vocabulary I was missing."*

> *" To me personally, LIF answers how I as a teacher design a lesson where thinking is required, and what kind of thinking I expect my students will do."*

> *"For teachers who already have a practice, LIF does not replace it but empowers it."*

Frederique Lemesle

French Language & Literature · UISG, Guangzhou, China

> *"LIF helped me formalize and explicitly explain to the students how the tasks they were asked to do involve thinking — activation, deepening, transfer. I also used LIF to push myself to formalize the artefacts suggested to make thinking visible."*

> *"LIF is also a great structure for me to make sure my own teaching goal and learning experience design is made visible to the students. I mentioned the LIF to them."*

VIII - CONCLUSION

This pilot confirmed something specific and useful about LIF. The framework gives teachers a vocabulary for the design decisions they are already making, and that vocabulary changes the quality of those decisions.

A teacher deciding not to intervene is making a Layer 5 call. A teacher choosing which thinking type to target before planning the task is making a Layer 1 call. These decisions were always happening. LIF makes them visible, nameable, and improvable.

The most important thing teachers across four countries taught me was about students. Students can think more deeply than their teachers assume. The conditions that require that thinking have to be deliberately designed, and most lessons do not yet design for them. LIF gives teachers a system for designing those conditions. Round 1 showed me what happens when they do.

The answer, consistently, was that students surprised their teachers. Ary's Grade X students separating themselves from morally complex characters and critiquing them. Mika's 4-year-olds asking their own mathematical questions before she had asked hers. William's Grade 11 students showing faster transfer than predicted because the first-attempt thinking had been their own. Frederique's students discovering that formulating a good question is harder than answering one.

That is what learning looks like when thinking is the design goal of a lesson.

IX - WHAT'S NEXT

Round 1 closed. Round 2 will open late May 2026, with an updated Teacher's Guide 2.0 that incorporates what this cohort surfaced. The application call is already open.

In the meantime, the work continues in public. I write *Lesson Intelligence*, a newsletter where I share what I am learning about designing lessons in the AI era, including pilot insights as Round 2 develops. The current Teacher's Guide is available to download at lessonintelligence.com, and the framework is designed to be used in a single lesson before it is used in a whole unit. Start there.

I read every message that comes through. If you have a question, a reaction, or a lesson you want to share, write to me at info@lessonintelligence.com, or connect on LinkedIn. I respond personally.

THANK YOU!

"To all teachers who participated in the LIF Pilot Cohort Round 1. You said yes to a framework that had not been tested in a real classroom yet, opened your work to honest reflection, and stayed in the conversation through six weeks of planning and teaching. Round 1 exists because you gave it your time, and Round 2 is being built on what you taught me."

DAMIR ODOBASIC

Creator, Lesson Intelligence Framework
Head of Music, ICT & Digital Integration
Shanghai May 2026

Live online version: pilot.lessonintelligence.com — updated as Round 2 unfolds.

Lesson Intelligence Framework (LIF)

Designing lessons where thinking is **required**, **visible**, and **guided**.