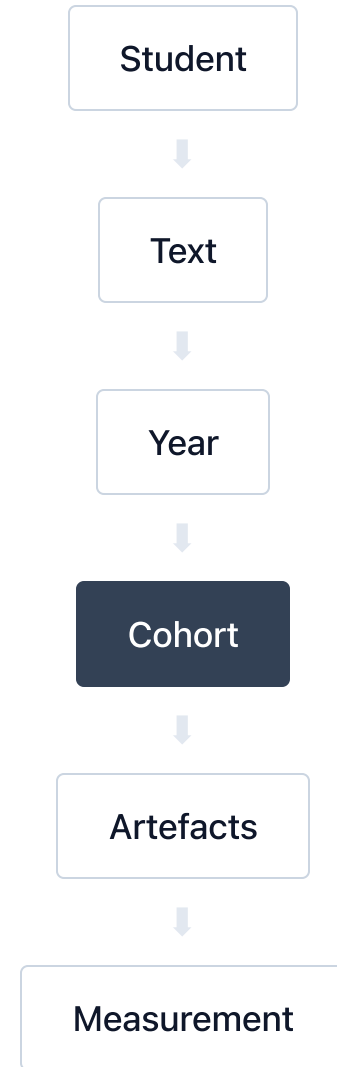# luminAIT

Appendix: How luminAIT Scales Without Violating Educational Reality

This note answers a single question: "These economics look strong — but how does this actually scale in the real world of secondary education?"

Student

Text

Year

Cohort

Artefacts

Measurement

I. System Constraints

The boundaries we do not cross.

The Error in Most Models

Most tutoring and EdTech models assume that students are fungible.

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That assumption breaks immediately in secondary English.

→ Students study **different texts by year level**

→ Texts require **specific contextual and literary knowledge**

→ Mixing students arbitrarily destroys instructional coherence

As a result, you **cannot** scale by simply "absorbing more students into classes" without degrading outcomes.

Any model that ignores this is doing hand-wavy math.

System Axioms

Structural constraints we accept as non-negotiable.

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1. Learning is text-anchored

2. Cohorts must be year-level specific

3. Ability bands must be compatible

4. Evidence & progression must be internally coherent

This means scale is **discrete**, not elastic.

II. The Mechanism

How the system scales inside the constraints.

The Unit of Scale

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Text-Anchored Cohort

/noun/

The smallest viable unit of scale in secondary English education that supports stable teaching quality.

Criteria:
- One shared text
- One year level
- Compatible ability range

Consequence:
- Artefacts are reusable
- Measurement is comparable

Scale is not the number of students. Scale is the number of viable cohorts.

Mechanism of Stickiness

Why progress is text-internal, not generic.

→ Students accumulate shared context

→ Parents see continuity across weeks and terms

→ Switching mid-text carries real cognitive cost

Retention is therefore **structural**, not contractual.

> Students don't stay because of lock-in — they stay because leaving resets accumulated progress.

III. The Economics

Auditable numbers.

Cohort Economics

Conservative baseline vs. Phase 1 Reality vs. 18-Month Pattern.

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Metric	Single Cohort (Baseline)	Phase 1 (Proof)	12-18 Months (Scale)
Structure	10 students, 3 terms	2–3 active cohorts	4–6 active cohorts
Revenue Base	$600 / student / term	Existing lead flow	Recurring + New Texts
Gross Revenue	$18,000	$36,000 – $54,000	**$90,000 – $110,000+**
Status	Unit Economics	Visible Reality	System Outcome

Six figures emerge through **compounding**, not aggregation.

→ Cohorts persist across years

→ Additional cohorts open using existing artefacts

Why This Is An Infrastructure Play

What generalises is the pattern, not the content.

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→ Infrastructure stays constant

→ Artefacts change by text/year

→ Measurement remains comparable

→ Economics compound without simplification

luminAIT scales by respecting educational constraints, not pretending they don't exist.