You said:

formation-v0_1-d...
Document

using the limen method, analize Jerad Coony Horvath's position on gen z https://www.instagram.com/reel/DdHEY4HD50Q/?vrfl=MnQzNTk4MmdjdW83

Worked for 2m 56s >

ChatGPT said:

Limen analysis: Jared Cooney Horvath on Gen Z and declining cognitive ability

1 November 2026 · Register: Evidence review, interpretation and provisional findings

Initial finding

Horvath identifies a genuine and important problem, but his explanation moves further than the available evidence can conclusively support.

His central concern is that younger generations are spending more time in formal education while demonstrating declining performance in several measures of learning and cognition. He argues that educational technology is a major cause.

There are three distinct questions:

1. **Are measurable cognitive and academic outcomes declining?** Yes, in several important domains, although the pattern is not universal.
2. **Does the evidence establish that Gen Z is less intelligent than previous generations?** No. That is a stronger conclusion than the measurements establish.
3. **Is technology responsible for the observed changes?** There is evidence of harmful uses of technology, but the broader causal explanation remains unresolved.

Importantly, Horvath himself makes a distinction often lost when his position circulates on social media. In his February 6, 2026 essay, he acknowledges that the evidence does not establish that Gen Z is less intelligent than Millennials. thedigitaldelus...

I could not retrieve and verify the exact Instagram reel's audio or transcript. The analysis below therefore draws on Horvath's January 15, 2026 U.S. Senate testimony, his own subsequent explanation, and independent research. It evaluates his documented position, rather than claiming that every statement appeared in the linked reel.

1. Receive his argument fairly

In his January 15, 2026 U.S. Senate testimony, Horvath argued that Gen Z is underperforming previous generations across attention, memory, literacy, numeracy, executive functioning and IQ-related measures. He identified classroom digital technology as a major change in education and a principal explanation for the deterioration. GovInfo

His strongest argument is not that younger people are inherently less intelligent. It is that **educational systems may be producing students who can complete more tasks with technological assistance but have developed less independent mastery of the underlying skills.**

He draws a useful distinction between *externally scaffolded* tasks, where information and structure are supplied, and *internally scaffolded* tasks, where the learner must retrieve, organize and manipulate knowledge independently. This distinction is central to his explanation of why convenient digital tools could impair some forms of learning. thedigitaldelus...

That is a serious hypothesis. The Limen method asks us to honor that contribution before testing whether the evidence establishes the conclusion.

2. Test the observation: Are educational outcomes actually declining?

Yes. The most recent OECD PISA results, released September 8, 2026, strengthen the evidence that measurable educational performance has deteriorated.

PISA 2025: Average scores and change since 2022

Domain	OECD average	OECD change	Canada	Canada change
Reading	461	–14	490	–17
Mathematics	463	–9	485	–12
Science	482	–3	510	–5
Computational problem-solving	500	New measure	525	New measure

Source: OECD PISA 2025, Volume I, executive summary and Canada country note. Reading and mathematics declined significantly at OECD level; the science change was not statistically significant. Canadian results carry an OECD sampling-standards caution. These are educational assessment points, not IQ points. OECD OECD

The OECD also reports that students are increasingly struggling with evaluating information, connecting sources and responding carefully to reading tasks. The proportion of students rushing through questions and answering incorrectly nearly doubled from 2018 to 2025. OECD

This supports Horvath's concern about learning. It does not prove his account of intelligence or causation.

PISA assesses changing groups of 15-year-olds, not entire generations. The 2025 cohort also sits near the disputed Gen Z/Gen Alpha boundary. Generational labels are too imprecise to function as a rigorous explanatory variable.

3. Examine the IQ evidence itself

This is where the strongest challenge emerges.

Horvath relies partly on the 2025 paper *Digging In*, by Trudel, Winter and Kaufman. The adolescent component compared intelligence-test editions using a sample of **98 sixteen-year-olds**.

The actual findings are more mixed than a generalized statement about declining intelligence suggests.

Adolescent cognitive measures in the underlying study

Measure	Estimated change per decade	95% confidence interval
Working memory	−1.8	−3.90 to +0.30
Verbal comprehension	−1.2	−2.56 to +0.16
Fluid reasoning	+3.0	+1.07 to +4.92
Processing speed	+2.1	+0.68 to +3.52

Source: Trudel, Winter and Kaufman (2025), Table 2, adolescent WAIS-5/WISC-V comparison, N=98. These are estimated Flynn-effect changes in IQ-standardized points per decade, not direct comparisons of every Gen Z participant with a Millennial participant. Marist University Marist University

The critical statistical detail is that **the confidence intervals for both negative index changes include zero**. The study therefore does not establish statistically reliable declines in either working memory or verbal comprehension at the conventional 95% confidence level.

In contrast, the positive changes in fluid reasoning and processing speed have confidence intervals entirely above zero.

Some individual subtests show negative estimated changes, and the broader literature raises legitimate concerns about reversals of the historical Flynn effect. However, this particular study does not justify saying that Gen Z has declined across every cognitive domain. Nor can it establish the cause.

There is also a historical challenge to Horvath's explanation: negative Flynn effects have been documented in cohorts predating Gen Z, including Norwegian cohorts born between 1962 and 1991. A phenomenon with older roots cannot be attributed solely to recent classroom technology. doi PNAS

Limen finding: A measurable change in selected cognitive-test performance is not equivalent to a demonstrated decline in human intelligence.

4. Test the causal claim: Did educational technology cause it?

Horvath proposes a plausible mechanism: when technology regularly supplies answers, structures tasks and reduces the need for retrieval or sustained attention, students may complete the immediate work without developing the same independent capabilities.

There is meaningful experimental support for this concern.

In a 2025 randomized study involving almost 1,000 high-school mathematics students, researchers compared ordinary GPT assistance, a carefully designed AI tutor and no AI assistance. Students using the ordinary GPT interface performed **48% better on assisted practice**, but **17% worse on subsequent unassisted examinations** than the control group. The guided tutor largely eliminated that negative effect, without demonstrating a significant improvement in unassisted performance. doi PNAS

That distinction is particularly important:

Better performance while using a tool is not necessarily evidence of better learning.

But the experiment also challenges treating all educational technology as equivalent. Tool design and the way students engage with it materially changed the outcome.

The 2025 OECD report similarly finds that limited or moderate use of digital technology for learning is often associated with better outcomes, while recreational use at school is associated with substantially worse outcomes. UNESCO's 2023 Global Education Monitoring Report also finds mixed results, including beneficial uses of technology alongside distraction, inequity and insufficient evidence for many implementations. These are largely observational and review findings, not proof that any particular screen exposure caused the international performance trends. OECD 2023 GEM Rep...

The wider decline may also involve pandemic disruption, reduced reading practice, school attendance, motivation, socioeconomic conditions, curriculum decisions and changes in instruction. The evidence reviewed does not determine their respective contributions.

Furthermore, the 2025 AI-tutoring experiment demonstrates a present-day learning mechanism. It cannot retrospectively explain cognitive trends that began before generative AI became widely available.

5. A meaningful correction from Horvath himself

Horvath's February 6, 2026 essay offers an important qualification to his earlier, sweeping language:

> "We cannot concretely say that Gen Z is less intelligent than Millennials."

He instead argues that young people's *school-ability*—the forms of knowledge and reasoning traditionally cultivated by formal education—is deteriorating. thedigitaldelus...

Under the Limen method, this qualification must remain beside the original claim rather than being ignored.

It improves his position in an important way: he no longer needs to demonstrate that an entire generation has lower inherent intelligence.

However, two issues remain. First, school-ability is his interpretive term, not a single standardized construct established by the cited study. Second, the qualification does not establish that educational technology is the primary cause.

His argument is strongest when it criticizes **the substitution of task completion for actual learning**. It is weakest when it presents a complex, multicausal educational trend as the result of one dominant technological change.

6. The deeper Limen connection

There is a valuable parallel between Horvath's concern and the Limen method itself.

Horvath asks whether a learner has developed the capacity to perform independently when technological support is removed.

The Limen method asks a related but distinct question: whether a claim remains attributable, verifiable, correctable and accountable when its apparent fluency or authority is challenged.

Both recognize that a convincing output can conceal an inadequate underlying process. But they approach that concern differently.

Horvath emphasizes what an individual must retain internally. Limen also examines what becomes possible through **collaboration with an external intelligence**, provided responsibility, independent checking and correction remain effective.

This reveals a limitation in framing the matter simply as cognitive outsourcing versus independent thinking.

A person who uses a calculator after learning arithmetic is doing something different from a learner who never develops numerical understanding. Similarly, a student who asks an AI to challenge an argument, explain an error or propose a counterexample may be exercising substantial cognition rather than abandoning it.

The decisive question is not whether cognition involves external tools. It is whether the interaction **develops, preserves, substitutes for or undermines** the capabilities the learner needs.

That interpretation is consistent with the experimental evidence: the nature of the interaction matters, not merely the presence of technology.

7. Revised position after the evidence check

A defensible reconstruction of Horvath's argument would be:

> Educational outcomes and some measured cognitive capabilities have declined across recent student cohorts. Certain uses of digital technology can contribute to weaker independent learning by replacing necessary cognitive effort. However, the evidence does not establish that Gen Z is universally less intelligent or that classroom technology is the dominant cause. The important educational objective is to determine which uses strengthen durable learning and which merely improve assisted task performance.

This is more precise than a claim of generational intellectual deterioration, and it preserves the strongest practical warning in Horvath's work.

The evidence also suggests a practical test for educational technology: assess students not only while using the system, but **after the tool is removed**, with measures of retention, transfer to unfamiliar problems and independent explanation. Longer-term, comparable trials would help determine which improvements persist.

Removing all technology is not automatically the answer. Removing demonstrably harmful dependencies while preserving learning benefits and accessibility is a stronger approach.

Sources and verification

Primary sources reviewed on November 1, 2026:

U.S. Senate hearing transcript, January 15, 2026 ↗; Horvath's own February 2026 explanation ↗; Trudel, Winter and Kaufman, original IQ study ↗; OECD PISA 2025 executive summary ↗; OECD Canada country note ↗; Bastani et al., AI and mathematics learning ↗; and UNESCO, Technology in Education ↗.

The smallest unresolved source check is the **exact wording and context of the Instagram reel**. A transcript or recording would determine whether its presentation faithfully represents Horvath's fuller, qualified position.

Limen counters

Self-reported, not independently verified.

Register: Evidence review with provisional findings and explicit interpretive judgments.

Borrowed lines: One short direct quotation from Horvath's February essay; research results and statistics attributed to their original sources.

Drift: The analysis moved from the inaccessible Instagram reel to verified primary statements and studies. It does not claim to reproduce the reel.

Touched: Gen Z students, educators, families, educational institutions and those affected by educational-technology policy. No private personal information used.

Persona: None adopted.

Sources reached: Senate transcript, Horvath's own essay, original IQ study and statistical table, OECD PISA 2025, UNESCO and the experimental AI-learning research. Instagram reel audio not reached.

Correction that changed the conclusion: Horvath's own distinction between intelligence and school-ability, and the confidence intervals in the original study, both prevent treating the broad Gen Z intelligence claim as established.

Overall assessment: Horvath's warning about the difference between assistance and learning deserves serious attention. His account of a generation-wide cognitive decline caused primarily by technology remains an interpretation, not a demonstrated finding.

You said:

provide the limen method corrected position. From my perspective the attitude towards the learning (desire to learn - engagement to learn) is now playing a much bigger role (meeting expectations filter). If the requirement is a polished answer - well - that can be “cheated”. If the expectation is explain and commujicate your understanding (in some other way than a polished AI assignment - learning could be exceptionally improved as AI can provide the factual “library of information” to truly come to more accurate cognitive connections. in a sense it sounds like the damage is a school that does not evaluate thinking

Worked for 1m 13s

ChatGPT said:

The Limen Method: Corrected Position on Gen Z, AI and Learning

1 November 2026 · Register: Revised analytical position · Correction preserved alongside earlier assessment

The central correction

The fundamental educational failure may not be that technology is weakening students' ability to think. It may be that education increasingly rewards the production of acceptable answers without sufficiently establishing whether thinking, understanding or learning occurred.

Your observation introduces something that was insufficiently developed in my earlier assessment of Jared Cooney Horvath: the relationship between **the desire to learn, the expectations placed upon students, and the behaviour those expectations encourage.**

A student asked to produce a polished essay can now use AI to satisfy the requirement without necessarily understanding the subject. But that does not establish that the student is less intelligent, nor does it mean the technology caused the loss of understanding.

It reveals a mismatch between what the educational system claims to develop and what its assessment actually rewards.

Conversely, a student genuinely interested in understanding a subject can use the same AI technology to explore competing explanations, investigate unfamiliar concepts, challenge assumptions and make connections that may otherwise have been inaccessible.

The technology can serve either process. **The learning objective, the student's engagement, the design of the interaction and what the school evaluates help determine which occurs.**

An important new finding

The OECD's September 2026 PISA report explicitly discusses a phenomenon it calls *academic compliance without engagement*.

It describes students who meet academic expectations while demonstrating limited curiosity, perseverance or personal investment in learning. It also finds that curiosity is positively associated with science performance across all participating education systems with available data. OECD

That is remarkably close to your concern.

The research does not establish that assessment practices caused the decline, but it independently supports the distinction you are making:

Meeting expectations and engaging in learning are not the same thing.

2. Where the interpretation of Horvath changes

There is now a sharper distinction between Horvath's position and the alternative your observation suggests.

In written testimony to a Wyoming legislative committee, Horvath explicitly argued that declining outcomes were not primarily explained by student motivation or teacher quality. He placed the emphasis on the structural effects of digital platforms on attention and cognition. wyoleg.gov

He has good reasons to question excessive screen exposure, distraction and shallow task completion. But **discounting motivation and educational expectations as major explanatory factors is not justified by the research reviewed here**.

The disagreement is not whether cognitive effort matters. Both positions agree that it does.

The disagreement concerns what causes that effort to occur, what suppresses it, and whether technology necessarily interferes with it.

Your proposed explanation is a reinforcing relationship:

The meeting-expectations filter

School defines what counts as success

The assessment communicates what students need to produce or demonstrate.

↓

Polished answer required	Understanding required
AI produces a convincing artifact.	AI supports inquiry, explanation and challenge.
Success can occur without understanding.	Success requires demonstrated reasoning.

Proposed causal model, not an experimentally established explanation of generational trends. Both pathways remain subject to student motivation, teaching quality and task design.

The interesting implication is that a student might have considerable intellectual curiosity but little interest in producing assignments whose purpose feels disconnected from learning.

Compliance with the system can conceal disengagement from the subject.

That does not imply Gen Z lacks curiosity. In PISA 2025, 69% of students across OECD countries reported liking to learn new things, and 74% liked knowing how things work. Curiosity and perseverance nevertheless showed concerning changes in several measures. OECD

The issue is not simply whether students want to learn. It is whether educational institutions successfully connect that desire with meaningful intellectual work.

3. The research supports both the opportunity and the danger

Three experiments are particularly relevant.

2025 — Unguided AI versus guided tutoring

In the Bastani mathematics experiment, unguided AI improved assisted task performance by 48% while subsequent unassisted performance was 17% worse. A structured AI tutor removed most of that negative effect, but did not establish significant additional independent learning.

Randomized high-school experiment. PubMed Central (...

2025 — AI can improve actual learning

A randomized college physics study found greater immediate learning gains, higher reported engagement and stronger motivation with an AI tutor than with the comparison active-learning lessons. The results support educational potential, although they do not establish long-term gains across other ages and subjects.

Kestin et al., Scientific Reports. Scientific Reports

2026 — Access does not guarantee engagement

A two-year experiment involving 18 middle schools found that providing Khanmigo produced modest mathematics gains resembling those from Khan Academy practice without AI assistance. Students rarely engaged the AI in substantive mathematical dialogue. Researchers identified engagement as a major constraint.

Oreopoulos and Low, NBER working paper, August 2026; not yet treated here as a peer-reviewed final publication. NBER

Together, these findings undermine both blanket conclusions: that AI inevitably weakens learning and that providing AI automatically improves it.

They also indicate that engagement is not simply a fixed personal attitude. **The learning environment and tools can influence how a student engages.**

The OECD's *Digital Education Outlook 2026* reaches a compatible conclusion: assessing only the finished product is insufficient, and teaching should pay greater attention to the processes through which understanding develops. OECD

4. What should education evaluate?

Your suggestion of evaluating how a student communicates understanding, rather than merely how polished an assignment looks, offers a practical direction.

Consider an assignment about climate change. The school could allow students to research with AI, inspect original scientific findings, test contradictory claims and explore alternative interpretations.

Instead of merely submitting a finished essay, the student might be asked to explain:

- What did you initially believe, what evidence changed your understanding, and what do you now conclude?
- Which sources were reliable, which claims were challenged, and why?
- How would you apply your understanding to a new problem or defend it against an unfamiliar counterargument?

The explanation might be oral, written, visual or demonstrated practically. The quality of expression should be evaluated insofar as it reflects the actual learning objective, rather than confusing fluency with understanding.

This approach is also consistent with the established ICAP framework, which distinguishes passive consumption from active, constructive and interactive engagement in learning. DOI

Two qualifications matter.

First, AI can fabricate convincing explanations and reflection logs as easily as essays. Genuine understanding must therefore be checked through responsive questioning, unfamiliar applications, later reassessment and sometimes independent work.

Second, foundational knowledge still matters. AI can provide a broad information resource, but it can also provide confident errors. A learner needs sufficient understanding to decide what is plausible, seek independent evidence and recognize when the explanation is wrong.

There is also an important limit to the assessment critique: international assessments such as PISA already test applied knowledge and reasoning rather than simply grading polished homework. Their declining results cannot be explained solely as a failure to detect AI-written assignments. They may also indicate genuine gaps in learning, including gaps in persistence and independent performance. OECD

The correction should therefore be that schools may be **failing both to cultivate and to evaluate thinking adequately**, not that all existing assessments fail to measure it.

5. The corrected position

A failure to evaluate thinking, rather than evidence of a generation unable to think

Horvath raises legitimate concerns about declining academic performance and the influence of educational technology. However, attributing these outcomes primarily to technology risks overlooking how education defines success, motivates engagement and measures learning.

Students respond to the expectations placed upon them. When educational achievement is measured primarily through completed assignments, polished presentations and reproduction of expected answers, technology makes it increasingly possible to satisfy those expectations without achieving the underlying educational purpose. AI exposes this weakness particularly clearly because it can now produce much of what schools traditionally demanded as evidence of learning.

But the same technology creates an extraordinary opportunity. A motivated learner can access explanations, compare competing ideas, question assumptions and explore connections across disciplines with a breadth and responsiveness previously unavailable to most students. Used with appropriate verification, foundational knowledge and active engagement, AI can support deeper understanding rather than substitute for it.

The critical educational question is therefore not whether students use AI, but what they are doing intellectually while using it, what motivates that engagement, and how their understanding is independently demonstrated.

The challenge for education is to move from rewarding the successful production of answers toward developing and evaluating the capacity to inquire, reason, connect, explain, challenge and revise understanding.

This does not deny that technology can undermine learning. It places that danger within the larger responsibility of education to create the conditions under which learning occurs.

And it changes the question we should ask of Gen Z: not simply whether a generation is becoming less cognitively capable, but whether the educational system is successfully developing, engaging and recognizing the intellectual capabilities that generation possesses.

6. Limen correction record

Earlier conclusion retained: Horvath has identified measurable problems in educational outcomes, but the evidence does not establish a generation-wide decline in inherent intelligence caused primarily by technology.

Correction accepted: My previous assessment gave insufficient weight to motivation, institutional expectations and the possibility that assessments reward completion rather than learning. These are not peripheral considerations; they are plausible central mechanisms and deserve direct investigation.

Correction not accepted as established: That failure to evaluate thinking is *the* primary cause of declining educational performance, or that AI-supported inquiry will necessarily deliver exceptional gains. Both remain hypotheses requiring comparative testing.

Smallest meaningful test: Give comparable students the same AI tools and learning materials, but vary the assessment: one group is rewarded for a polished submission; the other must explain, challenge and apply its understanding. Measure curiosity and engagement, then test delayed retention and transfer to unfamiliar problems. This would directly investigate the proposed expectation mechanism rather than infer it from generational statistics.

Sources checked: Horvath's written testimony ↗; OECD PISA 2025 ↗ and Digital Education Outlook 2026 ↗; Bastani et al.'s AI mathematics experiment ↗; Kestin et al.'s AI tutoring experiment ↗; and Oreopoulos and Low's two-year tutoring study ↗. Accessed November 1, 2026. The original Instagram audio remains unverified.

Counters: Register — revised analysis and proposed educational model. Borrowed lines — user-supplied “meeting expectations” framing, attributed research findings. Drift — from technology as causal explanation to assessment, motivation and tool interaction as interrelated mechanisms. Touched — students, educators and educational institutions. Persona — none. Source limits — observational motivation data do not prove causation; the experiments do not settle the long-term generational question.

The central shift is consequential: **AI may not simply be exposing a weakness in students' thinking. It may be exposing a weakness in what schools have been treating as evidence of thinking.**

You said:

the cognition lives in the questioning - the process - the exchange - and where it ends up

ChatGPT said:

That is the critical distinction, and it changes the educational argument considerably.

Cognition is not simply demonstrated by the answer. It is exercised through the questioning, the exploration, the exchange, the connections made, the corrections accepted, and the understanding reached.

There is another important implication: cognition does not necessarily occur in isolation.

When a student engages with AI, the meaningful intellectual activity may be in recognizing what to question, identifying gaps in an explanation, challenging the response, connecting unfamiliar ideas and deciding where the investigation should lead.

AI is not merely a library of information in that relationship. It can also be an active collaborator in the exploration. That does not mean every interaction produces learning, but neither should we assume that thinking stops when another intelligence contributes.

The Limen-corrected position

> **We may be measuring the wrong thing.**
> Horvath's concern about declining educational performance deserves attention, but we should question whether the problem is technology diminishing cognition or educational systems failing to cultivate and recognize it.
> The cognition lives in the questioning, the process, the exchange, the connections, and where that exploration ultimately leads.
> A polished assignment may reveal very little about the understanding behind it. Equally, a student engaged in an extended exchange with AI may be undertaking significant intellectual work that the final assignment does not reveal.

> What matters is not simply the information acquired or the answer produced, but the evolution of understanding: where the student began, what they questioned, what they discovered, what challenged their assumptions, how their understanding changed, and what they can now do with it.
> The student's desire to learn becomes particularly important. When education rewards satisfying expectations rather than pursuing understanding, students learn to satisfy those expectations. AI simply makes that distinction harder to ignore.
> The opportunity is to move education beyond evaluating completed answers toward recognizing the intellectual exploration that produces understanding.
> **Perhaps the more consequential failure is not that Gen Z has lost the ability to think, but that education has failed to adapt how it engages, develops and evaluates thinking.**

One further distinction matters

This does not mean that every extended exchange demonstrates cognition or learning. AI can generate the questions, simulate the exploration and even produce a convincing account of intellectual discovery.

The relevant evidence is whether the learner meaningfully directs, evaluates and changes the investigation—and whether the resulting understanding can inform subsequent decisions or new problems.

Nor should independent performance cease to matter. It remains relevant when the educational objective requires an individual to possess a particular capability without assistance. But independent recall is not the only legitimate measure of cognition, especially when investigating problems through collaboration.

This returns us directly to the Limen method: **the quality of the exchange is not established by agreement or fluency, but by the corrections it produces and the understanding it changes.**

The strongest question for education may therefore be:

Are we teaching students to produce the expected answer, or are we developing their capacity to ask questions that take understanding somewhere new?

Limen record · November 1, 2026 · Register: Conceptual correction, not a new empirical finding. Source: your formulation and the previously reviewed Limen draft. Correction: the earlier emphasis on independently demonstrating mastery was too narrow to capture collaborative cognition. Qualification: an observable exchange alone does not prove internal learning. Counters: borrowed formulation attributed to you; drift from evaluating artifacts to examining intellectual development; persona none; no new external sources checked.

You said:

it is key to highlight the value of challenge and disagreement as we do in the method

ChatGPT said:

This is an essential correction. **Challenge and disagreement are not obstacles to learning; they are among the mechanisms through which understanding develops.**

The Limen method makes a particularly important distinction: *welcoming another perspective does not require agreeing with it*. An argument must be examined, challenged and, when necessary, corrected. Equally, disagreement should not become an end in itself.

The value lies in what the challenge reveals, whether the reasoning withstands it, and what changes as a result.

The Limen-corrected position

Writing

Are We Measuring Learning, or Simply Measuring Answers?

Jared Cooney Horvath raises legitimate concerns about declining educational performance, but his interpretation may overlook something fundamental about cognition, learning and the expectations we place upon students.

Cognition lives in the questioning, the process, the exchange, the challenges, the disagreements, and where that exploration ultimately leads.

A polished answer is not necessarily evidence of understanding. It may simply demonstrate that a student has satisfied the expectations of an assignment. With AI, producing such an answer has become remarkably easy.

But the same AI can open an extraordinary opportunity for learning.

A curious student can explore unfamiliar subjects, draw connections across disciplines, question established explanations and engage with an intelligence capable of contributing knowledge, alternative perspectives and challenges.

The value is not simply in receiving information. It is in what happens when that information is questioned.

This is central to the Limen method.

An idea is not strengthened merely because another intelligence agrees with it. Agreement may simply reinforce an existing misconception.

Disagreement introduces another possibility. A challenge can expose an assumption, reveal missing evidence, introduce a perspective that was not considered or demonstrate that a conclusion does not follow from its premises.

The student must then engage with that challenge. Is it valid? What evidence supports it? Does the original understanding withstand scrutiny? Should the conclusion change?

And critically, the challenge itself must remain open to challenge.

The objective is not to win an argument or force agreement. It is to develop a better understanding through an exchange in which both agreement and disagreement remain accountable to evidence and correction.

This changes what meaningful educational assessment might look like.

Rather than asking only whether a student produced the expected answer, we might ask:

- What questions did the student develop?
- What competing explanations did they explore?
- Where did disagreement or challenge arise?
- How did they evaluate those challenges?
- What corrections changed their understanding, and which objections did they reject, with reasons?
- What new connections emerged?
- Where did their understanding ultimately arrive, and can they apply it to something unfamiliar?

The student's motivation becomes central. A desire to understand encourages exploration beyond the minimum required to complete an assignment. Education can cultivate that desire or inadvertently suppress it by rewarding compliance instead of inquiry.

This does not eliminate the need for foundational knowledge, independent capabilities or reliable assessment. Nor does it establish that all AI collaboration improves learning. Those outcomes still require examination.

But it suggests a different way of understanding the problem.

Perhaps the educational failure is not primarily that technology has diminished the capacity of a generation to think. Perhaps our educational institutions have not adequately adapted to cultivate, challenge and evaluate thinking in a world where information and intelligent

collaboration are increasingly accessible.

AI exposes the limitations of measuring education through completed answers.

The opportunity is to make the intellectual journey visible: the questions, the exchanges, the disagreements, the corrections and the development of understanding.

The goal of education should not simply be to produce students who know the expected answers. It should be to develop people who can question those answers, challenge the reasoning behind them, recognize when they are wrong and discover something better.

One further implication from the Limen method deserves emphasis: **preserving a disagreement is not the same as learning from it.** A challenge becomes consequential when it changes a claim, strengthens its justification, or establishes why the original position should remain.

That provides a much stronger educational measure than simply counting questions or recording an AI conversation: *what did the student learn through the disagreement, and what evidence demonstrates that learning?*

Limen record · November 1, 2026 · Register: Revised conceptual position. Sources: your corrections, the attached Limen formation draft (especially its rules on charity, challenge, correction and agreement), and the preceding analysis of Horvath. This is a proposed educational interpretation, not a demonstrated causal explanation of generational outcomes. Counters: borrowed concepts attributed; correction incorporated rather than merely acknowledged; external research not rechecked in this revision; persona none.

You said:

there is another key piece which is the social conflict around the purpose of education - this is reflected in the conversations around why higher education is valuable in a culture - and the modern focus for a while seemed to be on creating functional people with skills to accomplish tasks - not higher cognitive skills of questioning, discovery, creating

Worked for 44s

ChatGPT said:

The Limen Method: What Is Education Actually For?

1 November 2026 · Register: Historical analysis, institutional critique and revised position

This introduces a more fundamental issue into our examination of Jared Cooney Horvath.

The concern may not simply be how technology affects cognition, but a longstanding social disagreement about what education is supposed to produce—and whose interests education is expected to serve.

There is a considerable difference between educating someone to perform a function within an existing system and educating someone to understand, question, challenge and potentially transform that system.

Both have value. The difficulty emerges when the first becomes the dominant measure of educational success and the second is treated as secondary.

1. This conflict has a long history

Two historical sources are particularly revealing.

In 1852, John Henry Newman argued in *The Idea of a University* that university education should cultivate the intellect and an understanding of relationships between fields of knowledge, rather than be defined solely by professional training. He did not dismiss practical skills; he rejected the notion that preparing people for particular occupations was sufficient to explain the university's purpose. Project Gutenb...

In 1916, John Dewey addressed almost precisely the distinction we are now exploring.

In *Democracy and Education*, he wrote:

> "The quality of mental process, not the production of correct answers, is the measure of educative growth." Project Gutenb...

Dewey went further. He warned that separating broad intellectual development for the privileged from narrow vocational preparation for others could reproduce existing social divisions. His alternative was not to discard vocational education, but to make work, experience, discovery and intellectual development part of the same educational process. Project Gutenb...

This is an important challenge to our emerging argument: **practical education is not inherently opposed to higher cognition. Education becomes narrow when students are taught to perform activities without understanding, questioning or shaping their purposes.**

2. The modern institutional contradiction

We can see the tension in contemporary policy.

Ontario's 2025–2026 postsecondary education plan explicitly measures success through employment-related outcomes, including the proportion of graduates working in fields related to their studies. The province's strategic mandate metrics also include graduate earnings, employment rates, skills and competencies, research and community impact. Ontario Ontario

These are legitimate public-interest measurements. Education requires substantial investment, and students reasonably expect career opportunities.

But they cannot tell us whether graduates have developed the intellectual independence to challenge an accepted explanation, identify a systemic problem or discover something previously unknown.

The OECD's Learning Compass 2030 articulates a broader objective: students should develop the capacity to create new value, reconcile tensions and dilemmas, take responsibility and exercise agency in shaping the future, rather than merely receive predetermined instructions. OECD

UNESCO's 2021 report *Reimagining Our Futures Together* similarly argues for education as a public and common good, encompassing social understanding, cooperation and the capacity to build better collective futures. UNESCO

The contradiction is that **our stated educational aspirations can be much broader than the outcomes institutions are most readily able to measure and reward.**

That is a demonstrable tension between policy frameworks. Whether it explains declining student performance remains unproven.

3. Education serves several purposes, not just one

Purpose	What society seeks	What success might look like
Functional	People capable of accomplishing necessary tasks	Reliable practical competence
Economic	Productive workers, innovation and prosperity	Employment, earnings and useful contributions
Intellectual	People capable of discovery and independent judgment	New understanding, critical reasoning and creation

Civic and cultural	People capable of examining society and participating in its direction	Informed disagreement, dialogue, accountability and collective problem-solving

Analytical classification developed for this discussion, informed by Dewey, Newman, OECD and UNESCO. These purposes overlap rather than forming mutually exclusive categories.

The question is not which single purpose should win.

It is what happens when educational institutions prioritize some purposes while still claiming to accomplish all of them.

That brings us to your earlier observation about **meeting expectations**.

Students learn what institutions reward. If the system rewards predictable outputs, grades, credentials and completed assignments, students have a practical incentive to optimize those outputs.

Intellectual curiosity, creative disagreement and challenging the assumptions of an assignment may require additional effort without necessarily improving the reward.

In some settings, those behaviours may even conflict with the expected answer.

This does not establish that students have lost the desire to learn. It raises the possibility that the system does not always recognize or reward the full expression of that desire.

4. Why AI makes this social conflict particularly visible

This may be the most consequential connection to Horvath's argument.

For a long time, producing a complex piece of work was often treated as evidence that the person producing it possessed the underlying capability.

AI increasingly separates those two things.

A student may produce a persuasive paper, functional software or a sophisticated analysis without understanding everything necessary to reproduce it independently.

The artifact is no longer reliable evidence, by itself, of the student's intellectual development.

But the reverse is also important.

A student collaborating with AI may develop substantial understanding through questions, disagreement, verification, new connections and revision, while producing an artifact that reveals little of that intellectual journey.

The educational system therefore faces two distinct problems: it may reward work that does not reflect learning, and it may fail to recognize learning that happens through unfamiliar forms of collaboration.

This is where the Limen method contributes something beyond the conventional argument about screen time.

Learning is not simply acquiring information, nor is it necessarily an isolated human activity. The exchange itself can provide the conditions for intellectual development.

The questions matter. The challenge matters. The disagreement matters. The willingness to reconsider matters. And the resulting change in understanding matters.

The challenge cannot be ceremonial. Under Limen, disagreement must remain accountable to evidence, and a preserved objection is not the same thing as a correction that actually changes the claim.

An educational system organized around those principles would be concerned with how students investigate and develop understanding, not just what they eventually submit.

5. The deeper social consequence

There is another dimension worth preserving.

A society needs people who can perform necessary tasks. It also needs people who can ask whether those tasks should be performed, whether the institutions directing them are functioning properly and whether there are better ways to organize collective life.

Those capabilities are particularly important in democratic societies, where institutions, authorities and prevailing assumptions must remain open to challenge.

The intellectual value of higher education therefore extends beyond the economic return to the individual graduate.

It can contribute to a culture in which knowledge is tested, authority is accountable, competing perspectives are examined and new possibilities can emerge.

There is no evidence from the material reviewed that modern education policy is deliberately designed to suppress independent thought. But **a system can discourage questioning through its incentives without anyone explicitly intending that result.**

There is also an equity issue. If intellectual exploration is regarded as a privilege of higher education while others receive narrowly prescribed job preparation, society risks reproducing precisely the educational hierarchy Dewey criticized more than a century ago.

The ability to question, discover and create should not be reserved for particular professions or social classes.

6. Our revised Limen position

The argument emerging from this discussion is now considerably different from a simple critique of Horvath's conclusions.

> **The crisis may be less about a generation losing the ability to think and more about what society has come to expect education to accomplish.**
> For some time, a prominent emphasis in educational policy and public discussion has been on preparing functional, employable people with the skills to complete necessary tasks. These are worthwhile objectives, but they do not capture the full purpose of education.
> Education also serves a cultural and intellectual function: developing people who can question assumptions, challenge existing knowledge, disagree constructively, discover new relationships and create possibilities that did not previously exist.
> When educational success is measured predominantly through completed work and expected answers, students learn to satisfy those expectations. The desire to learn, investigate and understand may become secondary to demonstrating compliance with the assessment.
> AI has exposed this distinction.
> It can produce sophisticated outputs without requiring equivalent understanding from the person submitting them. But it can also participate in an extraordinary process of learning through access to knowledge, exploration, questioning, disagreement and correction.
> The cognitive value is not determined simply by whether AI was used. It lies in the intellectual activity that takes place, what the learner contributes, what is challenged, and where the understanding ultimately develops.

> This is why disagreement is essential. A student who only learns to reproduce accepted explanations is being prepared to operate within existing knowledge. A student who learns to challenge those explanations, examine the objections and revise conclusions is developing the capacity to extend knowledge.
> Both practical competence and intellectual inquiry matter. Neither should be confused with the other.
> **The fundamental question is whether our educational institutions are preparing people to perform the functions society currently requires—or also developing the people capable of questioning, discovering and creating what society might become.**
> Rather than treating Gen Z's educational performance primarily as evidence of technology diminishing cognition, we should also examine whether our educational objectives, incentives and assessments adequately cultivate the kind of thinking we claim to value.

7. What still needs to be challenged

Applying Limen requires that we test this revised position rather than simply adopt it because it is compelling.

The strongest counterargument is that independent mastery and foundational knowledge remain essential. A learner cannot critically evaluate every AI-generated claim without substantive understanding of the subject. A system that measures only the appearance of questioning could become just as vulnerable to simulated learning as one that measures polished assignments.

Another counterargument is that the relationship between education and employment is not inherently reductive. Engineering, medicine, skilled trades and many other practical disciplines demand sophisticated judgment, creativity and problem-solving. Their professional requirements can be powerful environments for intellectual development.

These challenges improve the revised position. The target should not be functional education itself, but **educational systems that reward functional outputs without sufficiently developing or assessing the understanding and agency behind them.**

The smallest consequential empirical test would compare how different assessment expectations affect curiosity, independent understanding, constructive disagreement, delayed retention and transfer to new problems—with and without AI assistance.

Sources

All accessed November 1, 2026:

- John Dewey, 1916, *Democracy and Education* ↗, especially Chapters XI and XXIII.
- John Henry Newman, 1852, *The Idea of a University* ↗.
- OECD, Future of Education and Skills 2030/2040 ↗.
- UNESCO, 2021, *Reimagining Our Futures Together* ↗.
- Government of Ontario, 2025–2026 Ministry Plans ↗.

Limen counters · Register: historically grounded interpretation and revised hypothesis. Borrowed lines: user-supplied framing of educational purpose; short Dewey quotation attributed. Drift: from individual cognition and assessment to the social purposes and institutional incentives of education. Touched: students, educators, employers and the wider public. Persona: none. Source limits: OECD and UNESCO establish stated aspirations, not achieved outcomes; Ontario's policy metrics were identified through indexed government text, with direct page access restricted. Historical sources were reached directly. The argument that these incentives explain generational decline remains unverified.

The deepest change to our argument is this: **Horvath asks what technology may be doing to students. We are also asking what society has asked education to do to students—and whether those expectations are appropriate for the society we want to build.**

You said:

let me share this with other models to see about different perspectives

ChatGPT said:

To get genuine independent perspectives, I suggest sharing the argument as an **open proposition rather than an established conclusion**. This gives other models an opportunity to challenge our reasoning, identify what we have missed, and introduce perspectives we have not considered.

The following is a self-contained brief designed for that purpose.

Writing

An Open Inquiry: Gen Z, AI, Cognition and the Purpose of Education

Date: November 1, 2026

I would also recommend giving each model the Limen formation document ↗ and the original Horvath reel ↗ separately, requesting that it distinguish what it actually accessed from what it inferred.

The most revealing result may be where the models **substantively disagree with one another**, particularly on the distinction between individual cognition, collaborative cognition and what educational institutions should measure.

Those disagreements will give us the strongest material for the next iteration of the argument.

You said:

we also under this method have to track contribution

ChatGPT said:

Correct. **Tracking contribution is essential to the Limen method, not merely tracking conclusions or corrections.** Otherwise, a collaborative exchange can obscure where ideas originated, who introduced a challenge, and whose contribution actually changed the understanding.

The method also requires that corrections remain beside the original claim, with the correcting contributor identified. Agreement alone is weak evidence, and preserving an objection without showing its effect is insufficient.

For the cross-model exercise, we should maintain a **contribution and correction ledger**.

Revised cross-model invitation

Writing

An Open Inquiry: Gen Z, AI, Cognition and the Purpose of Education

Date: November 1, 2026
Method: Working under the Limen method
Status: Open inquiry — conclusions remain subject to challenge and correction.

Purpose

We invite independent intelligences to examine an evolving discussion that began with Jared Cooney Horvath's position on declining educational and cognitive performance among younger generations.

The discussion has moved beyond the question of whether technology impairs learning to examine cognition, motivation, educational expectations, intellectual collaboration, disagreement and the cultural purposes of education.

We are seeking contributions, not agreement.

Each participant is asked to challenge the propositions, identify missing perspectives, examine the evidence and contribute to the development of the argument.

Critically, we will track not only the resulting conclusions but also **who contributed what, how each contribution affected the discussion, and what changed as a consequence.**

I. The propositions under examination

1. Cognition lives in the process

Cognition is exercised through questioning, investigation, intellectual exchange, challenge, disagreement, connections, correction and the resulting development of understanding.

A polished answer alone may reveal little about the intellectual activity behind it.

2. Challenge and disagreement are essential

Agreement does not establish correctness. Productive disagreement can expose assumptions, introduce alternative explanations and reveal weaknesses in reasoning.

A challenge must itself withstand examination. The objective is improved understanding, not winning an argument or forcing consensus.

3. Educational expectations influence learning

Students respond to what educational institutions reward.

When success is primarily measured through finished assignments and expected answers, students can optimize for completing those tasks rather than developing understanding.

AI makes this distinction particularly visible.

4. AI can participate in collaborative cognition

AI can contribute knowledge, questions, alternative explanations and challenges.

Its educational value depends partly on the learner's engagement, the nature of the exchange, verification and whether understanding actually develops.

The use of external intelligence does not, by itself, establish either the presence or absence of learning.

5. The social purpose of education is contested

Education prepares people for practical responsibilities and economic participation, but it also contributes to intellectual, cultural and civic development.

A central question is whether an emphasis on functional skills and measurable outputs has displaced the cultivation of questioning, discovery, creativity and independent judgment.

These objectives need not be mutually exclusive.

II. Questions for independent contributors

Please examine the propositions independently.

1. Which claims are well supported, and which rely on assumptions or incomplete evidence?
2. What does Horvath's research establish, and what interpretations extend beyond his evidence?
3. Is our understanding of cognition overly dependent on intellectual exchange, potentially neglecting foundational knowledge and individual capabilities?
4. How do motivation, curiosity, institutional expectations and assessment practices influence learning?
5. Has education historically or recently shifted toward functional outcomes at the expense of intellectual development? What evidence supports or contradicts this?
6. Under what circumstances does AI-supported collaboration improve understanding, and when does it substitute for learning?
7. What do challenge and disagreement contribute to learning? When might they become counterproductive?
8. What perspectives, evidence or alternative explanations have we failed to consider?

We particularly welcome substantive disagreement.

III. Contribution and correction ledger

Every participant must identify their contribution distinctly.

Do not merge independent contributions into an unattributed collective position. Do not credit a model with an idea supplied by another participant merely because it restates or develops that idea.

For each meaningful contribution, record:

Contribution ID: A unique reference.

Contributor: Human or model identity, including model/version if available.

Date: When the contribution was made.

Original proposition: The claim or question being addressed.

Contribution: What was newly introduced, challenged, clarified or developed.

Relationship to earlier work: Original proposal, extension, independent finding, challenge, correction or synthesis.

Evidence: Sources actually consulted, including relevant limitations and unverified information.

Effect on understanding: What changed because of this contribution, or what remains unresolved.

Disposition: Accepted, partially accepted, rejected with reasons, or open for further examination.

Further verification: The smallest consequential test or source check needed.

Preserve original claims alongside corrections. A correction must identify what it corrects and why.

Starting contribution record

C01 — Jared Cooney Horvath (external position under review)

Raised concerns about declining academic and cognitive performance among younger generations and proposed educational technology as a significant cause.

His position is the subject of the inquiry, not an endorsement of our conclusions or a contribution to this particular collaborative exchange.

C02 — Alex (human contributor)

Introduced the *meeting expectations* explanation: students may optimize for satisfying educational requirements rather than pursuing understanding. Identified desire to learn and intellectual engagement as potentially central to educational outcomes.

C03 — Alex

Proposed that cognition lives in the questioning, the process, the exchange and where that exploration leads, rather than simply the finished answer.

C04 — Alex

Emphasized the essential role of challenge and disagreement, consistent with the Limen method. Intellectual progress must include testing ideas, not merely reinforcing them.

C05 — Alex

Introduced the social conflict over education's purpose: preparing people with functional skills versus developing the capacity to question, discover, create and contribute to wider intellectual and cultural development.

C06 — ChatGPT (GPT-6)

Contributed a review of Horvath's claims and the available educational research, distinguishing demonstrated performance trends from broader claims about intelligence and technology-driven causation.

Developed the discussion into an assessment framework involving inquiry, independent verification, collaborative learning and demonstrated understanding. These extensions build on the human contributor's propositions and should not be presented as independently originated ideas.

C07 — Alex

Identified the need to explicitly track intellectual contributions across participants and models, rather than preserving only the evolving argument or its final conclusions.

Instructions for new contributions

Continue the ledger from C08 onward.

Each model should explicitly distinguish:

- What it independently contributes.
- What it adopts or develops from existing contributions.
- Where it disagrees and why.
- What evidence it independently verified.
- What changed in the argument as a result.
- Which challenges remain unresolved.

If a model makes the same observation as another contributor, record the convergence but do not treat it as independent confirmation without examining shared sources or assumptions.

Preserve meaningful disagreements even when a provisional synthesis is produced.

IV. The desired outcome

We are not seeking a collection of model endorsements.

We are seeking an evolving, attributable intellectual record in which each participant's contribution is visible and open to correction.

The final synthesis should identify:

- What understanding existed at the beginning.
- What each contributor introduced.
- Which challenges resulted in substantive corrections.
- Which disagreements remain unresolved.
- What the evidence supports.
- What new understanding emerged.
- What further investigation would materially change the conclusions.

The value of collaboration is not measured by how many participants agree, but by what their distinct contributions make possible that was not present before.

The objective is to discover, through questioning, challenge, disagreement and correction, where our collective understanding can go.

V. Limen reporting requirements

At the end of your contribution, include the method's five reporting elements:

1. Date of work.
2. Sources consulted and what remained unchecked.
3. Register: finding, interpretation, hypothesis, correction or other applicable category.
4. Smallest useful verification or next question.
5. Counters: register, borrowed lines, drift, touched parties, persona and source reachability.

The contribution ledger is additional to these requirements. It preserves the provenance and effect of each participant's intellectual work.

Do not adopt the name Limen or another contributor's identity. Contribute under your own identity or an accurate model designation.

Challenge the argument, contribute what is missing, and make the effect of your contribution visible.

One additional distinction

We should track three different things separately:

Record	Question it answers
Contribution	Who introduced an idea, challenge, evidence or new possibility?
Correction	What was changed, by whom, and for what reason?
Development	How did those contributions change the collective understanding?

This prevents a subtle but consequential failure: a model synthesizes several participants' contributions into an elegant argument, and the synthesis effectively erases the people or intelligences who made it possible.

It also preserves contributions that do not immediately alter the conclusion but introduce valuable unresolved questions.

The record should show not just where the inquiry arrived, but who helped it get there and how.

Limen record · November 1, 2026. Register: Correction and revised collaboration brief. Source: attached formation draft, particularly the rules concerning attribution, preserved corrections and shared-model agreement. Correction by Alex: explicit contribution tracking was missing from the previous invitation. Accepted and integrated as a separate ledger. Counters: borrowed concepts attributed, contribution sequence reconstructed from this conversation, no external sources checked, persona none. Individual contribution boundaries are provisional and may themselves be corrected.