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Content & Inquiry in an AI World

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Introduction

Here we are again... About 11 years ago, I posted "Content & Inquiry in a Google World", at a time when there were all sorts of opinion pieces, graphorisms and perspectives on the roles of learning and teaching when we can "*just Google it*". Twitter was a nice place back then. Now that AI is here to stay, are we in the same pattern of conversations about the roles of knowledge, skills and concepts – or has the conversation matured?

Here's the tL;dR summary from 2014:

> *I don't know anyone who can successfully teach 'content-free' in middle-high school, even when students are in charge of the learning. We do need to ensure that we teach* ***good content****: relevant, current, useful, interesting. We need to* ***teach that content well****, using effective methods for our own students, knowing our impact and ensuring as much as we can that we* ***don't reinforce misconception****. Google is a tool, not a teacher, and a teacher who could be replaced by a search engine should be. At the same time, we can't crowd out the opportunities for* ***creative, critical reflective thought (inquiry)****. We need to help students make connections and the selection (and teaching) of content is crucial in* ***building conceptual and transferable understandings****. We need to ensure that students know enough to be able to ask good questions.*

Full post here. Replace Google with AI and what changes?

Same Same But Different?

Pretty much. And maybe even more polarised than before. Now we have Google **and** AI. When I was writing about (re)defining inquiry in 2013-14*, there was a prog-trad divide on the Twitz that has since grown. MYP: Next Chapter was about to be launched and now the next phase of the Enhanced MYP is on the way. Understandings of inclusion have matured, as have the ethical and learning implications of educational technologies. Internationalised education has exploded and education remains a highly competitive marketplace for every tool, programme, workshop and resource under the sun.

(Re)Defining Inquiry: A Pragmatic Approach

Inspired by Dewey scholar Bente Elkjaer, the IB and many other sources, this is the 2014 working definition I came up with for a pragmatic approach to inquiry:

> ***Inquiry*** *is... **creative**, **critical, reflective thought**. It builds on a **solid foundation** of accessible, **well-learned** knowledge, skills and conceptual understandings, inviting learners to **take action** on their learning and ask "what if...?"*

At the time there wasn't a lot of quality resourcing on inquiry in secondary schools. Hattie's work was taking hold, with inquiry rated as very low impact – I think based on some very loose definitions and facilitative (rather than active) approaches, measured against standardised tests. Inquiry in secondary education was riddled with misconceptions and I don't think we were doing ourselves any favours.

Fast forward to 2025, are we in a better place? I think we could be, if we ride out the AI transition with a truly *active* approach to **in**quiry, teaching and learning. In 2014 I tried to distinguish between surface-level, passive "enquiry" approaches and active, conceptually-sound, deeper "inquiry".

> *"The **traditional distinction** between the verbs **enquire** and **inquire** is that **enquire** is to be used for general senses of 'ask', while **inquire** is reserved for uses meaning 'make a formal investigation'." [Oxford Living Dictionaries]*

Hattie distinguished between teachers as activators (vs facilitators), which stuck with me. His *Visible Learning* meta(meta) analyses have been updated. *Creating Cultures of Thinking* and many other Project Zero resources have put more power in our hands. Excellent books and resources such as Julie Stern's *Learning That Transfers* are available to support secondary school educators. We know more about *learning how to learn* and strategies that work for our students at the pointy end. Service learning is evolving into community engagement, competency frameworks are maturing and efforts such as the Mastery Transcript and New Metrics are catching the groundswell. Accreditation agencies are with us on the quest for *impact* in teaching and learning.

But... AI?

What's important now in teaching and learning if we can "just ChatGPT it?"
I don't really think it's an AI thing. Much like car headlights have evolved from being useful to being blinding, AI is shining a dazzling, harsh light on what makes quality curriculum. Is AI also the "full self drive" of navigating the transactional, well-charted "work" of schooling; ever-more obvious to our students, who need to prepare for more uncertain futures?

If we have not only the world's knowledge, but an expert personal assistant in our pockets – and integrated into every app – what matters? What would life be if we had to wait in every conversation for someone to consult their friend DeepSeek before they could respond?
I think it is a pragmatic approach to inquiry that can help us hold course. As AI erodes the commons of the internet, fake news proliferates, and deepfakes flood our streams, outsourcing thinking becomes too tempting, too accessible and too dangerous. Critical thinking is more important than ever. People who can navigate the world with clarity, confidence, nuance and joined-up reasoning will stand out. Double that if they can be resilient, compassionate and see things through to completion.

How do we activate learners who can *enquire, inquire, perspire and inspire*?

Curriculum ~~Still~~ Matters More Than Ever

Consider the following gross simplifications:

- Knowledge is the stuff we think with.
- Skills are the tools we use.
- Concepts connect it all together.
- Competencies are what we can *do*.
- Transfer carries us into new contexts.
- Action challenges and inspires.
- Reflection makes meaning.

Curriculum is a curation of the entire world's knowledge into compelling and manageable storylines for learners. It's raw material for meaning-making. It's how we connect past, present and future. And in international schools it's how we reach across the globe, with roots in our communities. Being able to access anything, anywhere, anytime isn't enough by itself to make sense of any of it.

We need to know enough about a topic to be able to ask good questions that carry our learning deeper. Technology might help students get a surface context for an inquiry, but an expert teacher can help elevate the questioning, safeguarding against misconceptions and shallow thinking. Learning for automaticity at lower levels of recall and application protects cognitive load for deeper thinking, connection and investigation. Recognising quality is a skill in itself; not all information is equal. In the current wave of reasoning models, being able to articulate our questions and negotiate outputs through clarity and domain-specific language could be learning superpowers.

Conclusion

The age of AI is more than a challenge to pedagogy, assessment and academic integrity. It's an opportunity to interrogate our notions of life-worthy learning, creating an education for hope and agency, thinking about:

- What should all learners know and be able to do *independently* to understand our world and their place in it?
- What can our learners *become experts* in, so they understand the boundaries and opportunities of emerging technologies in their areas of interests?
- How do we curate curriculum opportunities that are diverse and representative – connecting pasts, presents and futures?
- Where can we push students *beyond their comfort zones*, opening up new avenues for interest and deep learning?
- How can we apply *universal design for learning* principles that are inclusive, challenging and purposeful?
- Where are opportunities for *criticality, creativity, co-creation and action*?
- How do we design for *vigilance against misconceptions*?
- Where can the curriculum leverage new technologies for *new competencies*?

- Where can the curriculum move away from technology into *enhanced interpersonal and practical experiences*?
- Where are the "*what ifs…?*" in our curriculum for students to explore?

This rambleblog raises more questions than answers but the premise is this: let's not make the mistakes of the "Just Google It" era.

Post-Script: VI. Inquiry-Based Teaching as a Foundation of Progressive Education

Inquiry is central to the IB's approaches to teaching and learning (ATTL), yet may remain poorly understood in secondary school contexts. Traditional measures of inquiry-based teaching have a moderate effect size of *d=0.49*. Within the meta-analyses, effect sizes are hugely variable. This is one domain where not all comparisons are equal, as definitions of inquiry vary considerably… yet measurement of effect size remains pinned to external assessments.

Effective inquiry is a deep pedagogy that requires active teacher engagement. In the context of a high-agency IB school, a solid definition of inquiry needs to be the root of the pedagogical approaches that follow. Through the definition I propose above, , we can see a constellation of constructivist and high-impact strategies are required, for example:

- Collective teacher efficacy (d=1.57)
- Student self-reported grades/expectations (d=1.33)
- Conceptual change programmes (d=1.16)
- Feedback (d=0.90)
- Constructivist teaching (d=0.9)
- Metacognitive strategies:
- Transfer strategies (d=0.86)
- Argumentation (d=0.86)
- Classroom discussion (d=0.82)
- Deliberate practice (d=0.79)
- Elaboration and organisation (d=0.75)
- Evaluation and reflection (d=0.75)
- Teacher clarity (d=0.75)
- Project-based learning (d=0.78)
- Reciprocal teaching (d=0.74)
- Self-verbalisation/self-questioning (d=0.67)
- Success criteria (d=0.64)

Effective inquiry requires excellent, collaborative teaching practices and critical attention to the impacts of learning on learners. The expert inquiry teacher knows which strategies to use and when, planning with intention and actively building the development of learner agency, self-efficacy and metacognition.

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