

White Paper on Insights Research

Inherent & seeming contradictions create a tension that when resolved by the learner, with or without guidance, results in insight, typically known as an “AHA moment”.

Insight: an unexpected shift in the way we understand things. Insights change our mental model (network of beliefs about the world) by adding new and important beliefs, or discarding wrong or misleading beliefs. When we have an insight, it changes the way we understand.

3 Pathways to gain insights: connecting new information to an existing model; taking contradictory data seriously instead of discarding or discounting it; and by finding leverage points and assumptions that are getting in our way.

6 Key Principles:

Diagnosis: An educator must know where the students stand in order to know what will provide insight for them. Be interested and take seriously “wrong” answers provided and ask how / why they arrive at that answer. This will reveal the “fly in the ointment”

Unlearning: these flawed beliefs need to be discarded, but we are often resistant to do so. Disconfirming examples, and step-by-step, or proximal development increments can be helpful (holding a book and placing a book on springs to begin to reveal the insight that a table is pushing up on the book resting on it).

Feedback: It is important, potentially necessary, for educators to not provide feedback, but for students to generate their own feedback and engage in reflection around the reasons for their actions. Without this, in a progressive fashion where they are asked questions, not given results, insight is not common.

Knowledge Shields: we all try to preserve our mental models, explain away data that conflicts with them, and in general accept cosmetic changes that don’t really teach us about the underlying issue. Be weary of this when trying to teach insight-full lessons, and attempt make breaking knowledge shields a fun and interesting thing in and of itself.

Pathways to Insight: Forming connections, investigating contradictions, or discovering assumptions and leverage points we hadn’t appreciated before or were holding us back in our understanding.

The Insight Stance: developing an “insight mindset” is key. This means encouraging (not squashing) curiosity, wonder, and fascination with the world and it’s many interesting / strange facts. By supporting students in their curiosity, questions, and odd comments, respecting their contribution, and asking them to explain or the whole class to help think about a problem, educators can increase the likelihood that engaged minds will reap valuable insights.

Klein, G. Teaching Through Insights. (n.d.). Retrieved March 24, 2019, from

<https://www.psychologytoday.com/blog/seeing-what-others-dont/201507/teaching-through-insights>