THOUGHT PAPER

open innovators

Expert's Dilemma

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Expert's Dilemma

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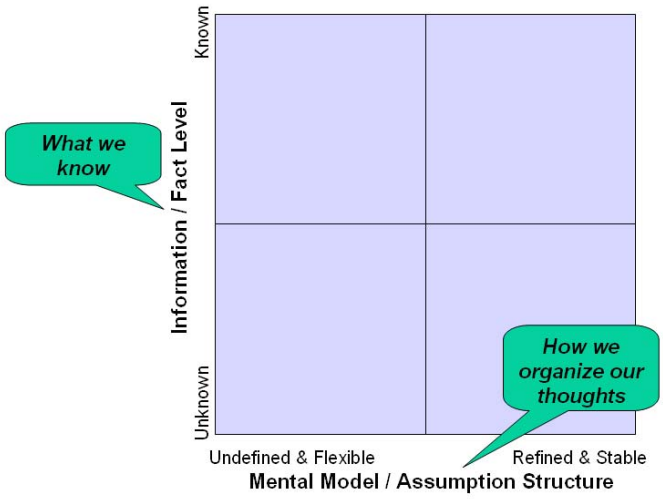
Can people be too smart to innovate?

Can R&D organizations with deeply experienced engineers and scientists hold too much knowledge to develop radically new solutions or services? Interestingly, those with the highest level of knowledge often have the highest level of attachment to their beliefs which puts them at the greatest risk for being out-maneuvered, out-paced and out-innovated. Simply put, the same knowledge that elevated someone to a position of expertise carries the risk of holding that person back and preventing them from growing. And, at the organizational level, the same success that catapulted a group to profitability will become an outdated success that hinders the group from staying competitive.

Innovation happens when commonly accepted frameworks are shifted, twisted or re-aligned to expose greater opportunities, benefits and growth that are in alignment with current realities. Those with the most invested in their personal mental models (experts), however, have the most attachment to their old views, frequently to the extent that they are no longer aware of the assumptions that were the foundations of their models. People who have forgotten the origins of their models are the least likely to be able to be able to shift, twist and make the re-alignments necessary to innovate.



A Knowledge Framework

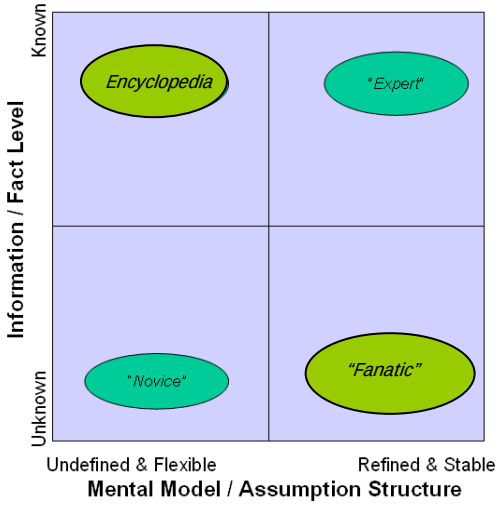
This dilemma can be best explained using a simplified model - a 2x2 matrix in which the vertical axis describes how people collect information and the horizontal axis describes how people assimilate the information into a mental model. The ability to apply collected information into a realistic mental model leads to functional "knowledge".

To bring this model to life, consider the nature of people who live in the four quadrants of this framework. In the lower left quadrant, we find a person without much information and without any mental model. We might call this person a "novice".

Next, imagine someone who has just acquired a great deal of factual information (perhaps after reading a book or performing a Google search). This person can now likely pass any standardized test on the subject and get an "A". But, without any framework or mental model, this person is not much more value than a hard-drive. At an extreme, we might call this person an "encyclopedia".

Next, imagine quite the opposite, someone who has strong convictions on a particular subject, but has no data to support their views. This person now has an opinion on a topic and possibly a great deal of emotional connection to this belief, but really has no underlying information upon which to base this framework. We might call this person a "fanatic".

Lastly, imagine when you were taking university classes in your favorite area of knowledge. Chances are that you were given a number of facts and then were challenged to manipulate those facts in a variety of contexts. You can probably remember the feeling of accomplishment of being able to piece multiple facts together in a manner that made sense and perhaps even a feeling of joy from the resulting clarity; the 'a-ha' moments. Things made sense. Over the years, you were able to amass a great deal of facts and place them into an elegant model. We might call a person who has

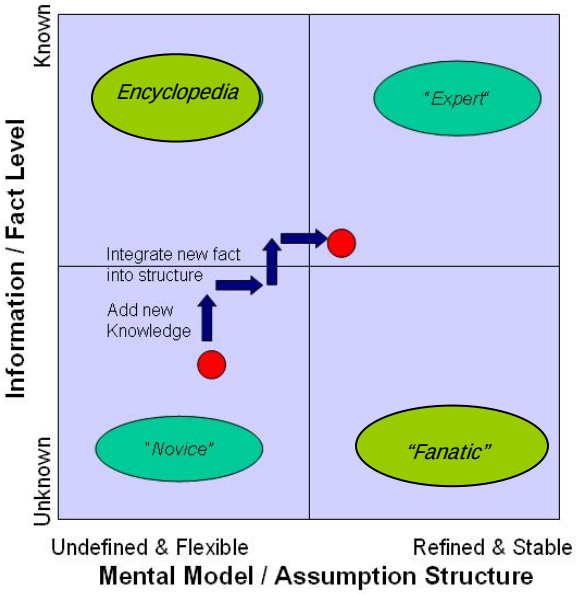


a large amount of information and a working model in which to organize this information an “expert”.

The way to learning

In the field of education, almost all energy is focused on taking people (typically our kids in school) from the novice quadrant into the expert quadrant.

Ask those who are passionate about helping kids to become great learners and the general consensus is that a balanced approach to gaining expertise is necessary. In such a manner (often referred to as a Constructivist approach), students are reminded of their existing mental models, then they are given a dose of new information and finally they are assisted in putting this new information into an updated mental model. By engaging a student in this process, their knowledge grows as a result of a stair-step increase in their information level and mental model maturity.



The Limits of Traditional Learning

Unfortunately, this approach has a diminishing return once we achieve some level of “expertise” within any domain. The reason is that this approach is contingent upon new information finding a “place” in an existing mental model.

What we see time and time again is that new and pertinent information rolls off of experts like water off of a duck’s back. When the expert gets a new piece of information, he/she is very reluctant to disturb their mental model with something that does not fit.

The new piece of information is typically ignored, discredited, perceived as a mere duplicate of earlier information, considered unworthy, considered heretical, or never entertained. Experts have such stable mental models there is no place to put the new information! As the state of the art continues to evolve in any field, the top quadrant’s boundary continues to migrate ever upward. Unfortunately, even though the state of the art evolves, experts stay fixed. The result is that the expert stays stationary while the whole upper “expert” quadrant migrates north, causing the once “expert” person to stagnate into a “fanatic”.

Root Causes of Expert’s Dilemma

Innovation is often not about discovering something new, but rather the ability to understand when something previously considered insignificant has gained a critical level of relevance in the field. In order for an expert to innovate, new information must be welcomed as a challenge to existing information. In the event that this new piece of information is valid, it implies the need to remove an outdated piece of information and replace it with the new.

But, this is where most experts fail. Removing old information is like removing a structural support beam in a skyscraper, it can allow our mental models to topple and come crashing down.

This ability to displace old information with new information requires an expert to relinquish their pride they associated with their existing mental frameworks. Many experts have invested years of blood sweat and sacrifice to attain their positions. They have been able to get promotions and found a place of honor in their professional society because of their mental models. The thought of jeopardizing their mental model is akin to divorcing one’s children – it’s a hard thing to do.

Letting one’s model fall apart makes people fear that they will be stuck in the “Novice Quadrant” once again, leaving them feeling inadequate, naked and adrift – it’s a very hard thing to do.

Re-Assuming

So, how do we take account of our own expertise and overcome the Expert’s Dilemma? The first step is to challenge old assumptions and update them. We recommend trying a variety of “Re-Assuming” techniques that simultaneously expose people to new data and new perspectives at the same time. We apply these techniques with small Context Teams that are active over a 2 to 8 week window. The parallel streams of education and empathy enable teams to multiply their innovation results.

In order for Re-Assuming techniques to fully flourish, the following conditions need to be supported for the Context Team:

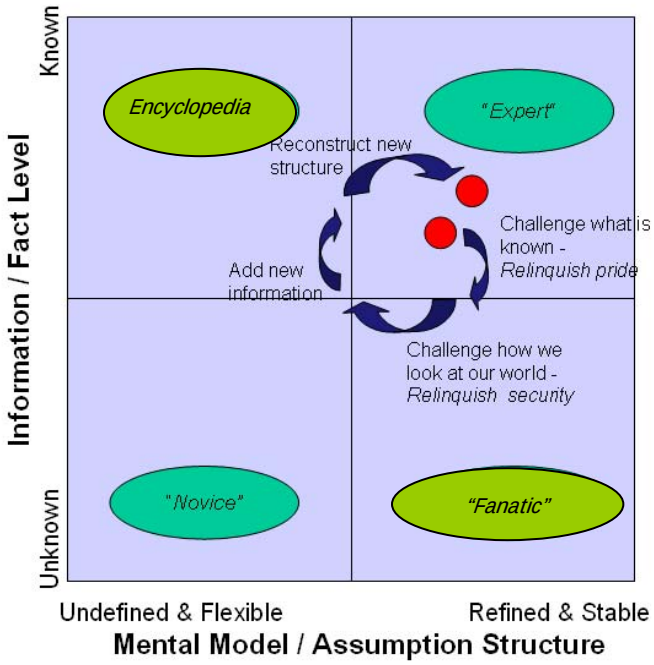
Trust: Team members must be allowed to relinquish the pride and security of their current mental models and re-emerge on the other side with stronger models. They must trust enough in others and feel safe enough to take a risk in trying a new approach and let their guard down temporarily.

Open Minds: Teams must be open to new information, perspectives and thinking. Without openness, they won't be able to see relevance of any new idea or justify any change.

Time: This process is often slow. Teams must be able to dwell ambiguity and discomfort long enough to go through the cycle and avoid falling-back into their old frameworks.

Mobility: In every sense of the word – teams must be able to get outside of current routines to gain the variety of perspectives necessary f or growth. This might include customer visits, supplier visits, grand-rounds, scenario planning, role playing, competitive intel, market scouting, ethnographic research, and empathic research

These approaches help simplify a difficult process. They lessen the discomfort associated with uncertainty. This discomfort explains why many innovations come from upstart companies who approach a situation without preconceived mental models and without a large burden of prior knowledge. It also explains why these same organizations that find success in displacing an incumbent frequently become the incumbent themselves and are out-smarted by the next up and coming entrepreneur. We believe that the great thinkers of the world were those who were able to muster the strength to challenge their mental models on a daily basis.



Wisdom Cycle Activities:
Activities that take us out of our work environment are one of the best and safest ways to reframe old assumptions. By seeing the world through others' eyes, visiting a different industry or engaging in a different project – we provide a shortcut to growth. These out-of-office experiences go far in helping to inspire new levels of openness and trust in a set time frame.

Working with partners who are not experts is another way to enable you and your colleagues to find a shortcut to new levels of thinking. Organizations such as Proctor and Gamble have established their "Connect and Develop" approach as their way to source innovation from outside their walls. Their goal of 50% of growth from outside sources is contingent upon their colleagues' ability to transcend their expertise and entertain new thinking and new mental models.

Summary:
In order to innovate, we must be able to transcend current expertise and attachment to our mental models. To do so, we must approach learning in a different way than that which brought us to this level of expertise. The Wisdom Cycle combines parallel paths of education and empathy to build innovation.

To overcome the Expert's Dilemma, we must endure the discomfort and insecurity of the destruction of our expertise for sufficient time to enable us to gather new information, re-construct stronger mental models and emerge on the "other side" of expertise as a wiser student of innovation.

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