Comments on the "Levels of Expertise Matrix."
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We watched several different presentations at the recent Wilderness Risk Managers Conference use the matrix of levels of expertise - unconsciously incompetent to unconsciously competent. NOLS presents this model twice in the Leadership Education Notebook, and it's used in NOLS' field curriculum. We're naturally skeptical of models, fearing that in their good intent to organize information and present concepts they can convey misinformation, or take a life of their own. This seems to be the case with this model.

We bristle every time we see this model presented with the implication that the subconscious competent is the highest level of expertise. Our concern about this model is the message it conveys regarding how an expert should act. It invokes Klein's seductive Recognition Primed Decision model and a tantalizing image of an expert armed with multiple heuristics and a basket of experience, who doesn't need to think. Some have likened the expert brain to a computer running in the background of the decision-making process. This supercomputer processes information at a subconscious level and the "expert" acts without thought. This may be helpful if it's a trained automatic response to a recognized pattern; the kayak roll, self-arrest, seeing the flaw in the climbing anchor. It may be harmful if the expert is unaware of the reasons for their actions and falls prey to the causality fallacy—the assumption that their actions produced the positive results.

More specifically, our concern is that the linear model takes us to an end, where we can "exercise good judgment without much thought about it." We worry that, like Malcolm Gladwell in the flawed Blink, NOLS staff are emphasizing subconscious competence as the hallmark of an expert, and neglect teaching the traps that expertise can present:

- lack of awareness (brought on by the expectation that expertise is subconscious) of the limits of our expertise;
- the bias of our experience;
- the frailties of our humanity;
- the inappropriate transference of expertise in one realm to another;
- and the use of a gut feeling as a substitute for deliberate thought.

In the original articles from which these models are developed is language on the value of reflection and deliberation by these experts. McCammon remarks that experts are more likely to seek feedback regarding both stability and instability of avalanche slopes, and are more likely to review past experiences than were recreationists.[1] Dreyfus calls the inferential reasoning deliberative rationality.[2] We call it mindfulness or reflective practice. In fact, several models (Schubert, Gilbert, Addy, Mata and others) have added a fifth level to the matrix to encompass this expert reflection.[3] These models typically associate this fifth level as that attained by outstanding educators.

Regardless of our skepticism of models, we'd like to reorganize this model both structurally and linguistically to link to our leadership skill of self-awareness and our educational goal of intentionality. We have replaced unconscious with unaware and conscious with aware. We want our students and instructors with their heads-up, their eyes open and their thoughts

focused on the situation at hand. We have also added a fifth level to the matrix that reflects the paths the expert might take: either the reflective path of the true master or the complacent path of the false master.

We draw this model in a circle, indicating we move all the time between these levels of expertise. We draw a loop back to aware and competent and label that loop mindfulness – the intentional consideration of how we think that is vital in the lifelong process of developing our judgment, and making us aware and competent master practitioners. We draw another loop of complacency, a trap of the expert who is not reflective and risks becoming unaware of their incompetence.

As educators, we should strive for reflective competence. The ability to intentionally develop our own judgment, and to pass on the lessons we have learned to our students requires that we spend time reflecting on our decision-making process. How can we expect to teach others if we cannot articulate what we ourselves have experienced? In our opinion, the hallmark of an expert is not that she has reached a level of subconscious heuristic processing. It is that she has developed the intentional practice of self-reflection that allows her to understand why she subconsciously chose to follow or ignore the heuristic at hand. It is this willingness to question one's underlying decision-making processes that allows one to truly become an expert. Once an individual enters the cycle of mindfulness, she becomes a much better student and educator.

[1] Dreyfus HL, Dreyfus SE. Expertise in Real World Contexts. Organization Studies 2005; (26)5: 779-792.

[2] Atkins D, McCammon M. Differences between Avalanche Experts and Novices International Snow Science Workshop Sept. 19–24, 2004, Jackson, WY

[3] Discussion cited on http://www.citehr.com/23983-conscious-competence-learning-model.html, retrieved on October 20, 2010