

How to apply Human Factors Science to policy and training

Practical application of Human Factors research has obvious and identifiable prerequisites, but the benefits in officer safety may be immeasurably great

Decision Making is the foundation for future performance.

The stress of time compressed life threatening situations (real or perceived) can greatly diminish an officer's ability to make sound decisions or function at an optimal level of performance. Policies, procedures and tactics lacking HF scientific input will greatly enhance the potential for Human Error!

Policing the nation's streets provides officers with constant opportunities to test the limits of human performance. These limitations are explained through the science of cognitive psychology and have been expanded specifically to law enforcement through direct research and application.

HF terms such as inattentional blindness, selective attention, slip and capture, as well as studies in action /reaction time, memory and decision making are all part of human performance science available to law enforcement executives for consideration in policy, procedure, and tactical applications.

HF science has been beneficial in our understanding of officer(s) actions under stress and has ensured officers are not held to inhuman standards of performance. HF science is often used to defend an officer's actions post-incident, but rarely used to effect change on the "front end". The need for a cultural change, complete with the inclusion of HF science, is important now more than ever.

Research on Human Factors

In an article titled "*A survey of the research on human factors related to lethal force encounters: implications for law enforcement training, tactics, and testimony*" Dr. Audrey Honig and Dr. Lewinski discuss adjusting police training based on human performance deficits. Their recommendations for increasing officer performance under stress include: reality-based training, repetitive training, positive self-talk, and the establishment of muscle memory. These are sound suggestions that are often generalized in current tactical training, but this is merely a starting point.

One suggestion for "working on the front end" is a review of policy, procedure and tactics by an HF consultant. The method of review is similar to a scientific case study and uses proven management techniques for successful implementation. The first step is to select a policy, procedure or tactic for review.

Selection should be based on internal statistical data (officer injured, accident rate, OIS situations, etc.). The policy, procedure and/or tactic should then be viewed through the eyes of a HF consultant. The specialist can identify the main human factors (action / reaction, stress, visual abilities, memory, decision making) involved and can suggest, through the use of scientific evidence, modifying the policy, procedure or tactic in order to mitigate the potential for human error.

Testing and Evaluation

Policies, procedures, and tactics modified based on the inclusion of HF science require an “testing” phase in which the change is tracked for patterns of improvement. The best environment for this phase is reality-based training (RBT).

RBT follows a strict set of guidelines set out in Ken Murray’s text, “Training at the Speed of Life.” Murray’s methodology of RBT ensures that any policy, procedure or tactic studied will be done under the most realistic — and yet controlled — situations, thereby providing the optimal environment for review.

Once a policy, procedure or tactic is modified through HF science and tested through RBT, the officers should be retrained accordingly. Of course, no change should be made without a managerial oversight program. Oversight should include a review any modifications at least yearly. The intent of the review is to determine effectiveness and should include an internally driven statistical analysis along with some type of survey data from officers.

Although recurring oversight of how we conduct business should never stop, an HF altered policy, procedure or tactic should be considered static once statistical data proves its success over a significant amount of time. If changes do need to be made to a modified tactic, they should be done so using the same methodology as discussed and reviewed again until the implementation is deemed successful.

In conclusion, a solid method for the inclusion of HF science into policy, procedure and tactics should include the review of internal data / statistics, HF consultation, testing, and implementation with recurring review. The overall methodology should be based in a risk vs. gain model that strives for low stress / high performance and good decision making.

Although we cannot completely alleviate human error, Law Enforcement has a responsibility to society based in trust that officers are trained to operate within their limits. This type of training is not currently wide spread, although many organizations have recognized the need. The airline industry, medical industry, and the transportation industry all include HF science within their cultures due to the critical nature of the work and consequences of error. A law enforcement officers most critical decision is whether to take a life – shouldn’t they operate under a similar culture?

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Certified Force Science Analyst, Dave Blake, M.Sc., CCI., is currently an Adjunct Professor of Criminal Justice, a Police Academy Instructor, and a Force Options Simulator Instructor at a large regional training center. His policing experience includes positions in; SWAT, Field Training, Gangs, Narcotics, Supervision, and Use of Force Training. Dave has instructor certifications in; Force Options Simulator, Firearms, DT, and Reality Based Training. He is a published author in several periodicals and journals to include a quarterly column with PoliceOne online magazine entitled; “The Science of Training”. He holds a Bachelor of Science in Criminal Justice Management and a Master’s of Science in Psychology. He is a Certified Criminal Investigator with the American College of Forensic Examiners Institute. Dave owns The Blake Consulting and Training Group which provides consulting / expert witness services on police practices (use of force) and human factors.