The journey towards thinking within highly reliable organizing started with the convergence of two different paths: A philosophy of excellence within the college (Crafton Hills College) and the question - Is it possible to project thought into an unstable environment?

The process culminated with the development of a critical thinking course that fulfills the critical thinking requirements for graduation and embedded the practice of decision making in unstable environments. Even though there are many different models and styles of critical thinking at colleges and universities, most of these courses only discuss the principles of critical thinking. The constructs of critical thinking within highly reliable organizations are most closely aligned with the expectation and field practice of the emergency services disciplines of fire-fighting and emergency medical services.

The course was developed by three faculty members. Two of the professors were from the department of Psychology, Dr. T.L. Brink and Dr. Sandra Moore, and one from the Department of Public Safety, Dr. Jim Holbrook. The course was designed to merge both the principles and practice of decision making in the unstable and unpredictable environments of emergency services. One of the challenges was to combine the predictability of the medical model with the adaptability of the emergency services model. At our college no other course in critical thinking combined both principle and practice. Our college had other critical thinking courses, and although instructors attempted to use real life examples drawn from clinical and business situations, no course had been specifically geared toward the needs of decision making in emergency situations or had used extensive role play or simulations.

The course is an introductory level college course where most of the students are from two distinct groups. Both traditional public safety students are mixed with traditional psychology students. This blending of classroom styles and student attributes has offered an enriched instructional environment for both student types. Using data from the college information streams, the students are a fairly equal mix of men and women from ages 18 to 24 and identify as Caucasian, Asian, or Hispanic. It is unknown from the data if the students are representative of underreported groups of mixed genetic backgrounds, socioeconomic, alternate religions, sexuality, or size.

The classroom instructional style uses andragogical principles and during each class period a situation is presented that attempts to put the classroom materials or discussions into action. The activity is usually given in the form of situational briefing identified originally by Weick, (situation, task, intent, concerns, and clarification (S.T.I.C.C.). In a formal after action review (AAR) component of the student learning outcomes one student wrote that “in the textbook everything can seem to be in perfect condition but when you actually do it, you find the things that will fail such as communications and weather etc.” This practice addition within the classroom helped the students put the material into some workable skill that should transfer to the workplace. Finally, the overall instructional design and intention was to provide the students
with the tools necessary to translate and see examples of normal reasoning and decision making within unstable and unpredictable environments.

Listed are two different examples I have used in the classroom that can be used by others. Situation: You have been dispatched to a remote section of the planet to conceive, design, and implement a culture for an organization that allows the future to happen. This organization is not the future, but the bridge to the future. The culture will be a center of learning and exploration and a model for others to replicate. Task: You are to create an organizational culture where no one is in charge yet everyone is responsible. Intent: Creation is a normal part of learning and exploration and one paradox is we cannot control the future but we can direct the change. Concerns: There is no safety issues associated with this activity. Clarification: What issues are unclear before you begin?

Situation: You have been dispatched to an astrological-geo-physical-religious affiliations conference. Because of your understanding of brain based behaviors and emergency services problem solving you have been asked to solve the final radio-carbon sequence of the difference between a puzzle and a mystery and to implement the structures to prevent the embedded conflict. Both the environment and the situation have deteriorated over the past few weeks due to extreme conflict among the groups. If you are unable to solve the issue a global conflict will erupt. Task: Since all reasoning is an attempt to figure something out and to solve some problem, your task is to work together collectively to try and implement some solution using all of the five principles of HRO’s to the organizational construct you created last week. Intent: Using exploratory competencies and working as a cooperative team will be helpful in extreme and unpredictable environments. Concerns: There are no safety concerns for this drill. One of the ancients has said that the world is about to unfold in a way that has never been experienced by anyone before (Tappe, N.) and you are the ones to be the bridge to the future. Without your efforts to bring clam to chaos, this little blue ball we float on will spiral into significant and long-lasting issues. Clarification: What is unclear before you begin?

Following are students’ comments from student learning outcomes and the after action review (AAR) of the course: a) helped us relate the course materials to the real world; b) ignoring blame and recognizing that what is important is how to improve performance, no more pointing fingers; c) gave us the tools to work with each other and realize that every person has something important to contribute; d) the group discussions and drills gave us the tools to work with each other and realize that every person has something important to contribute and we learned how to interact while remaining respectful towards each other’s differing opinions; f) realized that there are hundreds of different kinds of cultures beyond our own; g) people learned that even though they may not have been capable to lead, they were just as capable as the rest of the class. At the same time those who are more used to leading were forced in to the back seat in order to learn how to take orders from others; h) we learned that no matter what, some people are always going to disagree with the decisions we make, i) there was a feeling of safety in this class which made it possible for students feeling comfortable speaking up in class. We were empowered to say what we wanted without feeling wrong. We had a respectful environment where we could discuss closed issues without animosity. Everyone was allowed to speak their mind, even if it was toward Dr. Holbrook.
Finally, it is my position that a novice can learn the principles and practice of critical thinking used within unstable environments and the basic constructs of highly reliable organizing / organizations. A classroom that has an environment that is positive and open, presents challenging situations, and allows differing and potentially conflicting principles can prepare the emergency services community with a student who has at least been exposed to the language and skills of critical thinking. This basic analysis and application should help the next level of training and provider.