Greenhorns to Gurus:
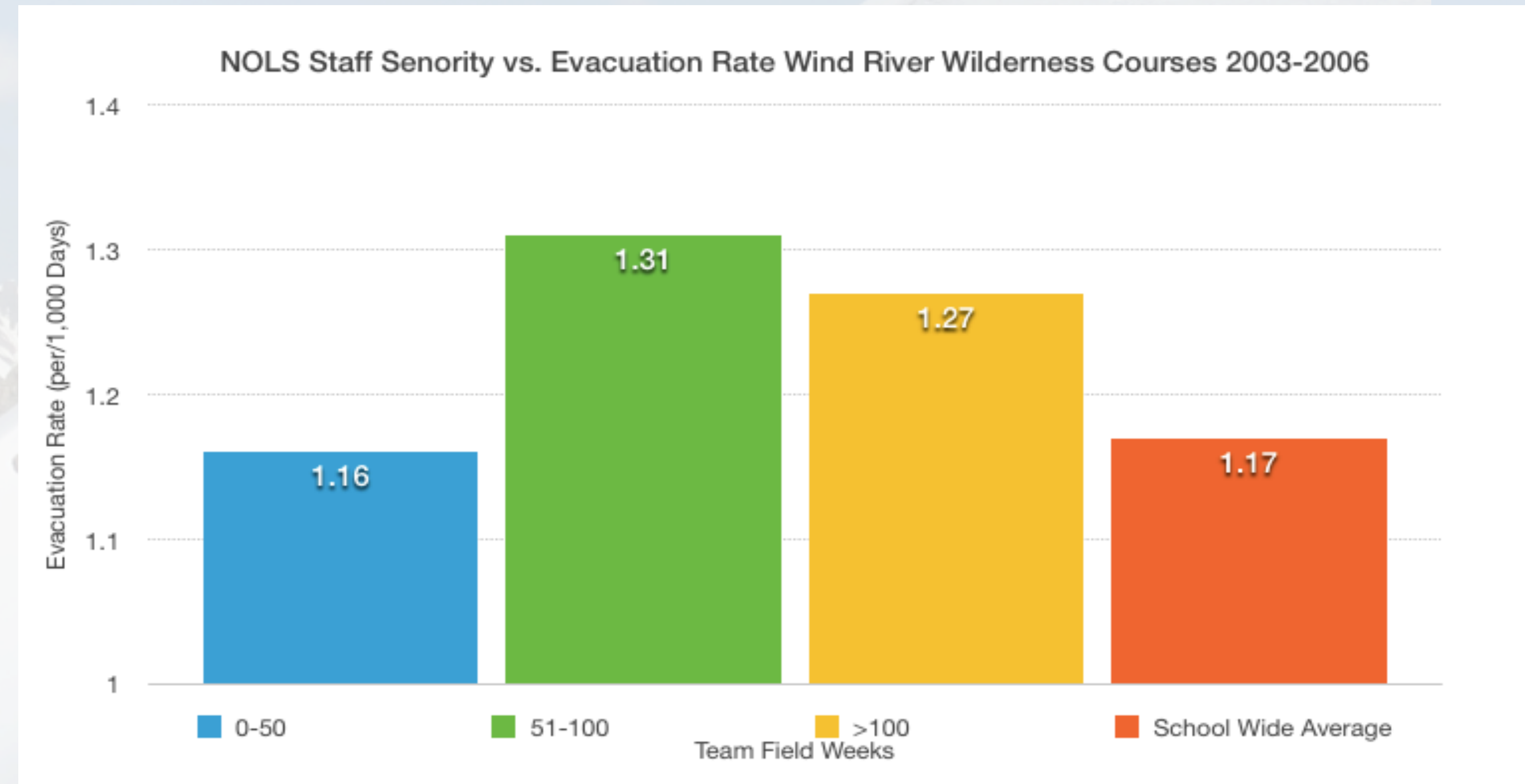## Field Staff supervision strategies

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Abstract

From Greenhorns to Gurus, field staff have a wide range of skills and experience. However, some research (Schimelpfenig et al, 2007) has shown that there is <u>not</u> a strong relationship between staff experience and incident rates. Aviation accident data may serve as an analogue to better understand the more dangerous periods in field staff's development. "Risk homeostasis" may also be occurring as staff competency and objective hazards of programs increase. To better address this, a model is presented to understand the types of mistakes and biases, as well as strengths staff have with varying levels of experience, consciousness, and competence.

	Greenhorn	Portentous Pilot	Skilled Intermediate/ False Master	Guru
Strengths:	• Beginner's mind • Fresh Eyes • Follows Protocols • Doesn't take shortcuts • Awareness of areas of high "perceived risk" • Often willing and excited to learn and put in effort to accomplish tasks	• Some experience is better than no experience… • More efficient in many tasks • May be able to begin to incorporate more curriculum or facilitation vs. simply managing physical/ emotional risks • Developing Schema for normal, maybe even a few non-normal events.	• Considerable Experience • Able to use multiple methods • Calibration of perceived risk vs. actual risk is becoming more accurate • Has often experienced non-normal and is becoming interested/aware of non-normal events (evacs, weather, behavioral) • Skilled at giving and receiving feedback • Can recognize most hazards and risks	• 10,000 + hours of experience • Able to use many methods and mentor others • Accurate calibration and perception of perceived risk vs. actual risk • Respect for, and understanding of non-normal events • Consistent methods to stay objective, manage uncertainty, and manage risks appropriately. • Understands risks and hazards **while prioritizing** them in a constantly shifting environment
Weaknesses:	• Slow • Hesitant to challenge "authority" or experts • Limited Schema • Lack of awareness of areas with high "actual risk", but low "perceived risk" • Needs lots of protocols • No concept of "normal" vs. not-normal • May not recognize risks or may become overwhelmed with apparent risks	• Starting to take shortcuts • Often overestimates abilities • Can be heavily influenced by who they have worked with • Sometimes involved in power struggles with peers • Usually attached to specific methods • "Non-event" feedback diminishes respect for risks • May not recognize all risks, and undervalue some	• Can overestimate ability • Can underestimate ability • In the "doldrums" of the learning curve. • Complacency is a challenge • "Skill atrophy" may be an issue in technical programs as staff become field managers, instead of technicians • Can become settled in their methods, hesitant to try new things/approaches that may actually be more effective	• Needs to lower exposure to risk because of cumulative exposure • Complacency • Can become bored with standard programming, may become distracted with personal agenda or goals • Gurus may also be apt to gradually lesson risk tolerance as age, schema, and reward vs. risk ratio changes
Strategies for managers:	• Focus on normal operations and sense making • Empower staff with "one-vote veto" the value of "beginner's eyes" • Mentor staff in the practices of identifying risks and determining actual vs. perceived risk	• Inform them that they are in the "danger zone" • Define decision making strategies amongst staff teams • Develop schema for "non-normal" via case studies and recurrent trainings • Mentor staff in the practice of not only identifying risks, but prioritizing them	• Remind staff it is a long road to become a true expert • Focus on challenging assumptions, and the "whys" behind decisions • Steer staff to understand their "risk budget" based on program's outcomes and mission • Remind staff that "non-event feedback" doesn't mean they can't have a non-normal, serious incident occur	• Acknowledge experience, create culture of continued growth with professional courtesy checks and perspectives • Expert "Halo's" should be recognized and the balance of power/perspectives adjusted • These staff are the true eyes and ears of the program….Listen! • When appropriate, give more freedom and utilize key players to create a culture of safety via role modeling, policy design, and peer accountability

NOLS Staff Seniority vs. Evacuation Rate Wind River Wilderness Courses 2003-2006

Does staff experience make a difference in evacuation rates?
A study by Schimelpfenig, Leemon, et al[2] (NOLS Data) in 2007 compared medical evacuation data to field staff team experience. The study looked at courses in the Wind River Mountains and sampled 85 courses. The studied concluded: **"..the study found no significant relationships between course leader or instructor team seniority and evacuations and risk management incidents."** [2]
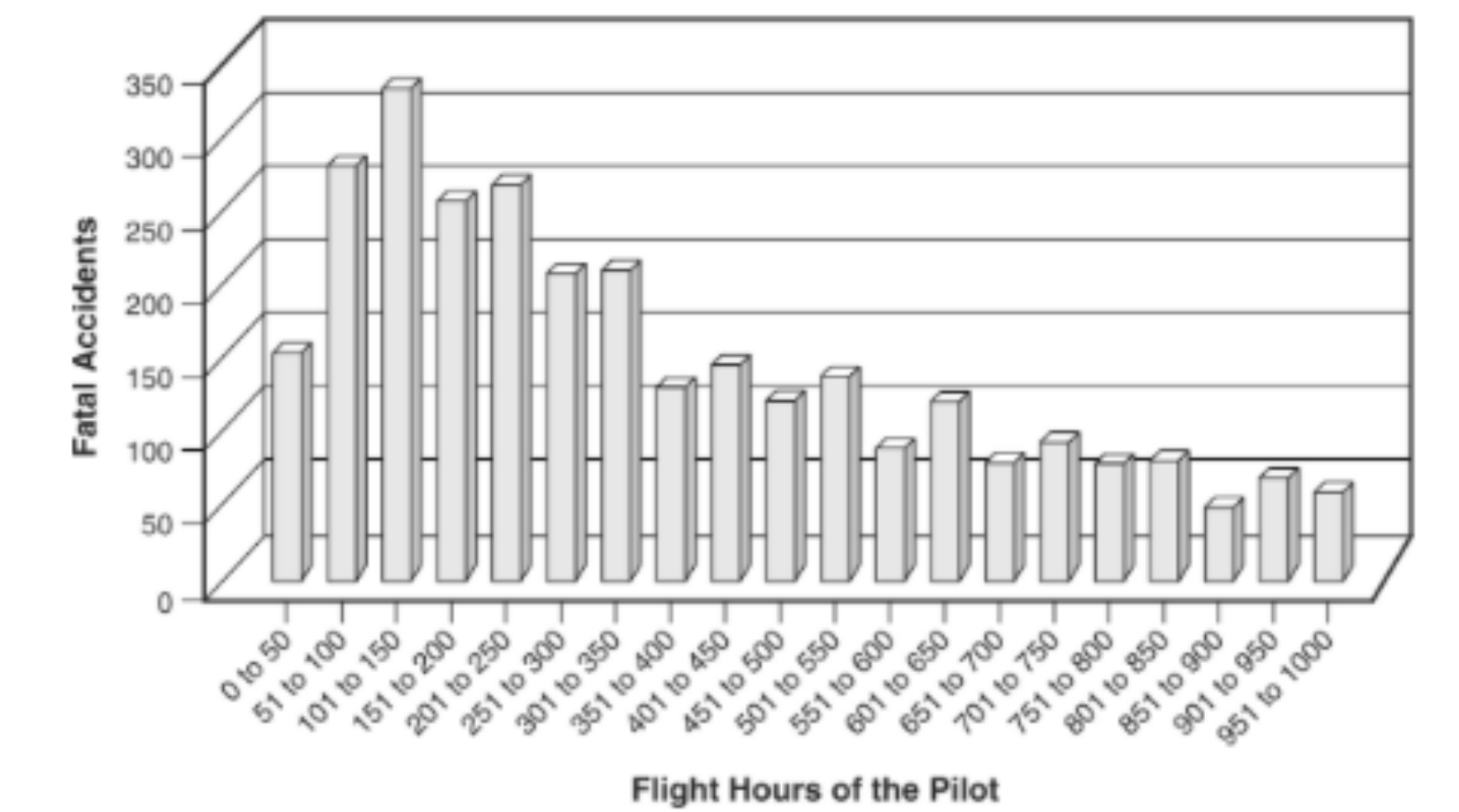

The Learning Curve: Experience, Consciousness, and Competence

Concept Graph:
This graph presents a concept of how field staff's experience, consciousness, and competence are related. Field days are noted on the x axis, consciousness on the Y and competence on the Z axis. Note that, many staff probably develop along the suggested curve, in which they **encounter two significant "false summits" in their development.** *The first is the* **"Portentous Pilot"** *peak, where most accidents occur in aviation[1]. The second, is the* **Skilled Intermediate/False Expert phase,** *where it takes significant experience coupled with a focused effort on increasing one's consciousness to become a "Guru". Work by M. Gladwell and others suggest that about 10,000 hours is needed to produce an expert.[3]*
Experience: the process of doing and seeing things and of having things happen to you, the length of time that you have spent doing something (such as a particular job)
Consciousness: is the state or quality of awareness, or, of being aware of an external object or something within oneself. It has been defined as: the ability to experience or to feel, wakefulness, having a sense of selfhood, and the executive control system of the mind.
Competence: the ability to do something successfully or efficiently

Figure 1.1 Total fatal accidents—private and student pilots, 1983 to 1999.

Does Aviation Accident data have lessons to tell us?
Aviation may shed some light on managing risk in complex environments. In his book, "The Killing Zone" Paul Craig[1] presents data that suggests that the time <u>when pilots have 50 to 350 hours is the most dangerous period.</u> This data set may be able to serve as an analogue to better understand the relationship of staff experience and accidents in outdoor programming.

Key questions to increase staff consciousness:
1) How much experience do you or your team have in this field area/activity/student population/working together?
2) What decisions will you/ did you make? What is your greatest risk management concern? What was the most hazardous thing you did on course? Would you do it again? Why do you think that is/was the right decision?
3) How will/were the decisions in your staff team be made?
4) What significant incidents has the program or other entities encountered? Injuries, fatalities, near misses?
5) What is the goal of the program? How much risk will you be taking to meet this goal? / Did you meet the outcomes of the course? What risks did you create to achieve these goals?
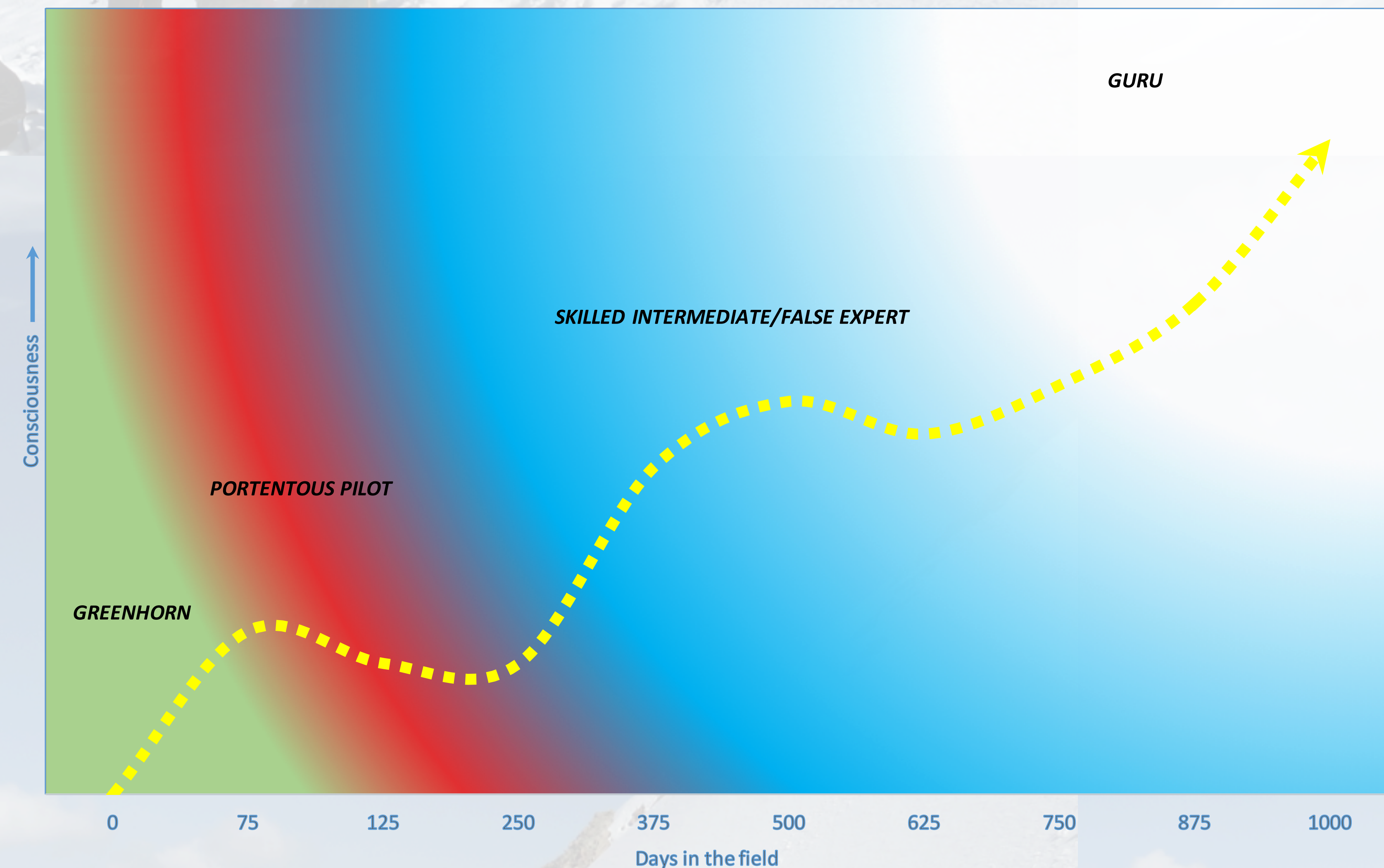
Conclusion

Field staff can become skilled and effective along a growth curve that is non-linear. If we use aviation as a rough analogy (1 hr flight = 10 hrs in the field, 10hrs/day), staff may be in the **most dangerous period between 50- 350 days** in the field. **Supervisors can use briefing and debriefing techniques with staff teams to leverage learning opportunities, help recognize "non-event" feed back, and consider using a common language to identify different stages of staff development.** Because senior staff may be working more difficult and challenging courses/environments, incident rates may be similar to less experienced staff teams in more benign environments. This Risk Homeostasis effect predicts that through time, as skill and judgment increase, senior staff are assigned more challenging and hazards contracts. Further studies would benefit from close tracking of field staff seniority and the severity and the types of incidents that tend to occur.

References
1) Craig, Paul A. "The Killing Zone" How and Why Pilots Die, 2nd Edition, McGraw Hill, 2013
2) Schimelpfenig Tod, Leeman Drew, Sibthorp Jim, Field Instructor Seniority Part One: Seniority vs. Incidents and Evacuations, WRMC 2007
3) Gladwell, Malcolm. Outliers: The Story of Success. 1st ed. New York: Little, Brown and Company, 2008.
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