CREST

CENTRE FOR RESEARCH AND EVIDENCE ON SECURITY THREATS

CREST GUIDE:
HOW TRAINING AND PROFESSIONAL EXPERIENCE AFFECT THE ABILITY TO SPOT TARGETS

This guide presents an overview of some of the difficulties in training to spot faces.

> **A well-designed training programme can accelerate practice effects. But what does it mean for a training programme to be well-designed?**

The goal of workforce training is to enable people to quickly reach a level of competency that allows them to perform their work effectively. When the work task is search, the good news is that for a newcomer search and image comparison generally improves with practice. A well-designed training programme can accelerate practice effects. But what does it mean for a training programme to be well-designed?

- **Practice should not oversimplify the task.** If a task is complex, training should not present only the easiest examples. Rather, difficult and easy examples should be presented from the start. The better the range of practice examples, the easier it is for people to apply what they learn to new examples.

- **Practice should be adaptive.** While not over-simplifying, it makes the task achievable from the start, according to the skill the trainee shows. As skill improves, difficulty increases.

- **Practice should give feedback.** If possible, feedback should be specific to individual decisions rather than an overall performance evaluation. It should also point the way to what to do differently.

- **If a task involves multiple parts, practice all parts of the task.** The coordination of different parts of a task is a skill in itself that often needs practice, and so if different parts are learned separately, the coordination skill is not learned.

IS PRACTICE ENOUGH TO ENABLE GOOD PERFORMANCE?

It goes without saying that a professional generally has had quite a lot more practice than a person who has just completed training. However, a professional often picks up quite a lot of subtle information that is not part of training, so they are often much more skilful than would be predicted by practice alone.

The other way, though, that professionals with experience differ from relative novices is that they have survived in their job. A person who is just not good at a task that is critical for their work is likely to not stay in the job. You might call it survival of the fittest.

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Professionals sometimes stop doing a target-detection task as frequently as they used to because their job responsibilities have broadened. If this happens, they may experience some skill fade, and so would require a bit of practice to get back up to speed. Relearning tends to be faster than learning in the first place.

If targets change over time or the way targets are hidden change over time, it will be necessary to train even experienced professionals about the changes.

HOW GOOD CAN THEY GET?

There are inherent limits to how good performance can get. Training can help people achieve those limits but cannot move people beyond them.

A good example is face matching. People are often surprised by how difficult it is to decide whether or not two images depict the same person, if the person is unfamiliar. Many kinds of training have been tried.

Once people have reached a certain level of skill, further training and experience has little effect. There are people who will do the task better than others, but training will not allow an average face matcher to become an excellent face matcher.

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