The importance of deliberate and repetitive practice and feedback are well recognized features which lead to effective learning.

To provide adequate opportunity of these key features, learners must have access to:

- appropriate simulation devices,
- equipment,
- faculty mentoring, expertise, feedback, presence, and
- individualized time to acquire a designated skill to the defined level of competence or mastery.
Vision of AIMS

- Develop a low-cost solution, focused on the measurement of human performance related to specific real-time, 3D psychometric measurements of clinical procedural skills.
- Improve and increase opportunities for individual, independent, deliberate practice, with real-time, objective assessment and expert feedback for procedural skill acquisition.
- Provide professional instruction with individualized autonomous feedback for learners and performance analytics for instructors.

The AIMS System

Schematic representation of AIMS. The Kinect camera observes the procedure and feeds the data to the computer, which then compares the observation with the mastery performance model and provides feedback.
AIMS tasking screen. When a module is selected, the system provides the student with the context of the training module and its specific assessment requirements.

In the teaching mode, the system will provide on-screen and audio, step-by-step instruction to the learner. Learners may also request additional information or instruction on the procedure or a specific step through AIMI using voice commands.
Results display. This display shows a histogram of scores observed for the trained individual (or a cohort of learners) allowing for recognition of performance trends allowing faculty to monitor and/or provide supplemental performance improvement training.

Questions and Discussion

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