

Immersive Learning: Suspend Disbelief

LI KA SHING CENTER FOR LEARNING AND KNOWLEDGE | <http://lksc.stanford.edu>

The Immersive Learning Center (ILC) will provide the most intensive form of active learning in medicine. The practice and science of medicine cannot be learned solely via passive means. Caring for real human beings is an active process; preparing students, interns and residents, and experienced physicians and teams for the rigors of medical practice requires facilities and programs of active learning. Stanford is a world pioneer of various forms of Immersive and Simulation-based Learning.



A range of easily accessible learning opportunities

Simulation offers valuable learning experiences that are difficult to obtain in real life. Learners address multiple different aspects of cognitive and psychomotor skills, including knowledge, hands-on procedures, critical decision-making, effective communication and teamwork. They train for a variety of patient care activities ranging from preventive care to invasive surgery. Because any clinical situation can be portrayed at will, these learning opportunities can be scheduled as part of various courses.



The freedom to make mistakes and learn from them

Working in a simulated environment allows learners to seamlessly maneuver through a variety of skills and tasks and to make mistakes without the need for intervention by experts to preclude patient harm. By seeing the outcome of their mistakes, learners gain powerful insight into the consequences of their actions and the need to “get it right”. Specific medical procedures or surgical operations can be practiced until the learner is comfortable and competent.



The ability to scale complexity to match learner experience

Programmable to any level of expertise, mannequin-based simulation is an adjunct to specially trained “standardized patient” actors. Actors can’t have abnormal vital signs, suffer acute life-threatening condition, or undergo drug treatment or invasive procedures. For those setting the mannequin simulators are the patients. The ILC will provide students with a range of simulations and experiences, from seeing a single patient setting to dealing with many patients at once, even mass casualty situation. Four large simulation rooms and 10 clinic rooms flexibly replicate different clinical settings, including an operating room; a multi-bay emergency department or intensive care unit; single-patient hospital rooms or critical care isolation rooms.



Detailed feedback and evaluation

Occurring in a controlled environment, learners receive immediate feedback by reviewing videotape or debriefing with their instructors and peers as they evaluate their decisions and actions. These sessions are the “jewel” to imbedding learning lessons.

Other unique sites in the ILC are a dedicated room to enable the use of role-playing healthcare “virtual worlds” (similar to online multiplayer games such as “World of Warcraft”™) to allow student-controlled avatars to represent nurses or doctors in a trauma ward and respond to a patient’s changing condition.