

# How important is NIFA's simulated training for RNFA students?

Without it there is a good chance you may never reach expert levels. Read the study below:

Excerpt taken from <http://content.nejm.org/cgi/content/full/355/25/2664> Study dated Dec. 2006.  
(Blue and Red underlined highlights, caption boxes and New England logo provided and revised by NIFA®)



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## Teaching Surgical Skills — Changes in the Wind

Richard K. Reznick, M.D., M.Ed., and Helen MacRae, M.D. Sir William Halsted introduced a [German-style residency training system with an emphasis on graded responsibility at Johns Hopkins Hospital in 1889](#).<sup>1</sup> This system remains the cornerstone of surgical training in North America more than a century later. However, advances in educational theory, as well as mounting pressures in the clinical environment, [have led to questions about the reliance on this approach to teaching technical skills](#).

Those pressures include a move toward a shorter workweek for residents<sup>2,3</sup> and an emphasis on operating room efficiency, both of which diminish teaching time. Yet the patients in our teaching hospitals are generally much sicker and more complex than in times past. The increasing complexity of cases and a greater emphasis on mitigating medical malpractice risk by assisting residents with technical procedures.

Don't rely on surgeon preceptors for your RNFA training. This Study shows that Simulated Labs better prepare (RNFA) students for technical skills in the OR.

Sheer volume of exposure, rather than specifically designed curricula, is the hallmark of current surgical training. For learning through work with "real" patients have diminished, interest in laboratories with formal curricula to teach surgical skills, has increased dramatically. [In this new model of surgical education, basic surgical skills are learned and practiced on models and simulators, with the aim of better preparing trainees for the operating room experience](#).<sup>5,6,7,8,9,10</sup>

These new training techniques are based on established theories of the ways in which motor skills are acquired and expertise is developed. Fitts and Posner's three-stage theory of motor skill acquisition is widely accepted in both the motor skills literature and the surgical literature (Table 1).<sup>11,12</sup> In the cognitive stage, the learner intellectualizes the task; performance is erratic, and the procedure is carried out in distinct steps. [For example, with a surgical skill as simple as tying a knot, in the cognitive stage the learner must understand the mechanics of the skill — how to hold the tie, how to place the throws, and how to move the hands](#). With practice and feedback, the learner gains procedural knowledge which knowledge is translated into appropriate motor behavior. The learner is able to tie but is able to execute the task more fluidly, with fewer interruptions. In the intermediate stage, the learner's performance improves. The learner no longer needs to think about how to execute this task. The learner can execute the task more fluidly. [This model has obvious implications for surgical training. The earlier stages of teaching technical skills should take place outside the operating room; practice is the rule until automaticity in basic skills is achieved](#). This mastery of basic skills allows trainees to focus on more complex issues, both technical and nontechnical, in the operating room. [To return to the example of knot tying, the learner who still has to think about how to tie a square knot is much less likely to pick up on other teaching that transpires in the operating room than is the learner who has mastered this simple skill](#). Ericsson has helped to elucidate the acquisition of expertise.<sup>13,14</sup> Expert performance represents the highest level of skill acquisition and the final result of a gradual improvement in performance through extended experience in a given domain. [According to Ericsson, most professionals reach a stable, average level of performance and maintain this status for the rest of their careers](#). In surgery, "experts" have been defined by Ericsson as experienced surgeons with consistently better outcomes than nonexperts. An extensive literature on the clinical outcomes supports the hypothesis that practice is an important determinant of expertise. Support for Ericsson's contention that many professionals probably do not attain true expertise. The literature also supports the skill level among practitioners, since variations in performance have been shown to be related to the amount of practice. [Deliberate practice is a critical process for the development of mastery or expertise](#). Ericsson argues that the number of hours spent in deliberate practice, rather than just hours spent in surgery, is an important determinant of the level of expertise.<sup>13</sup> [Deliberate practice calls for the individual to focus on a defined task, typically identified by a teacher, to improve particular aspects of performance; it involves repeated practice along with coaching and immediate feedback on performance](#). The attained level of expertise has been shown to be closely related to time devoted to deliberate practice in the performance of expert musicians, chess players, and athletes. [In the current model of surgical training, based primarily on apprenticeship, the opportunities for deliberate practice are rare](#). Operations are complex, and it is difficult to focus on one small component of the procedure..." **Call today to arrange the skills training that will more benefit your career. 1-800-922-7747 press 1**

NIFA's Program gives RNFA students 34 to 54 hours of simulated surgical training *outside* the OR *before* they enter the OR suite as an RNFA intern.

Without adequate simulated training there is a good chance you (RNFA) will be average for life.