



# Learning Laparoscopic Skills: Observation or Practice?

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**OBJECTIVE:** The aim of this study was to assess the respective roles of observation and direct practice in the retention of laparoscopic skills.

**MATERIALS AND METHODS:** Eighteen fifth-year medical students were included in a two-session laparoscopic learning course. During the first session, each participant was given four tasks to complete from the "Basic skills" and "Essential tasks" modules of the Simbionix LAP Mentor™, and another four tasks for observation only. During the second session, each participant completed all eight tasks. Performance evaluation was assessed using the objective structured assessment of technical skills (OSATS) global rating scale and LAP Mentor metrics.

**RESULTS:** The mean OSATS score during the first session (S1) was  $16.7 \pm 3.2$ . This increased by 34% during the second session (S2), reaching  $21.8 \pm 2.6$  in the group of former observer students (S2O,  $P < .0001$ ), and by 56% ( $25.1 \pm 1.9$ ) in the group of former practicing students (S2A,  $P < .0001$ ). The analysis of LAP Mentor metrics showed that 14 of 28 parameters (50%) improved in the S2A group compared to S1, whereas only 25% of the parameters improved in the S2O group, the difference being significant ( $P = .048$ ). In both groups, the more complex the task, the more the number of improved parameters decreased.

**CONCLUSIONS:** Although simple observation of laparoscopic skills improved further performance, direct practice on the virtual reality trainer ensured more effective training. This work therefore advocates incorporating personal training on simulators into residents' surgical curricula.

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