

## Surgical Education Research project LIST

### Projects



#### Learning Dashboard

How does continuous reflection support learning? Reflection activities have been identified as one of the most effective sources of learning in medicine. We will build and test a web-based dashboard for residents to collect, study, and annotate learning experiences.

#### Skills Exercises

Breaking skills down into small sub-skills and building them back up is a proven way to teach. Part-to-whole task practice is used in sports and the arts to train. In this project, exercises will be developed for practicing and mastering the subskills of basic surgical skills and putting them together into whole skills.

#### Breast rotation EPAs

Curriculum and assessment for students' mastery of basic physician activities outlined in ACGME as skills residents must have upon entering residency. Entrustable Professional Activities (EPAs) have been described but not specifically for breast oncology surgery. This project seeks to fill that gap.

#### Operating posture and thinking

"Does operating posture, especially when it is un-ergonomic, change how surgeons think?' This study will test whether there is an influence of posture on situational awareness and attention.

#### Pre-Op Flight Plan

The flight plan is a pre-operative online tool to engage the trainee in the planning of the operation and to allow for communication in regard to one's participation in the case. We will plan to develop and test the tool with residents to assess for improved fluidity in the case and overall proficiency.

**Feedback Skills and Knowledge**

Can residents' fund of clinical knowledge and judgment be assessed through their feedback to a hypothetical learner? We will examine residents' operative feedback to inexperienced residents performing steps in lap choles in terms of the content of the feedback and how they would deliver it.

**Step-Wise Latencies**

Does the time between the end of performing one step and the beginning of performing another indicate expert non-technical skills? Video of procedures (whipple; lap chole) will be segmented into discrete steps and the times for when the surgeon ended one step and began the next will be calculated.

**Case Outcome Predictions**

Will residents' clinical and operative judgment improve if they engage in activities to (1) predict patient outcomes at the end of a case, and (2) reflect on the actual outcomes when presented to them?

**Your project here!**

We encourage you to bring your education project ideas to a SERP meeting. If you can, fill out a password-protected online form with your project details so we can plan the meeting to address it.

You can use this link or a QR code. Enter “**surgery**” as the password.

[https://pitt.co1.qualtrics.com/jfe/form/SV\\_9tReUjikDcSWEu1](https://pitt.co1.qualtrics.com/jfe/form/SV_9tReUjikDcSWEu1)

To use the QR code, open your phone camera and aim it at this image.  
Enter “**surgery**” as the password.

