

# **Sonographic Teaching and Learning Framework-Closing the Gap**

*Heather Ruttkofsky, RVT, Assistant Professor, Program Director Vascular Technology  
Jackson College*

## **Introduction**

Clinical education for sonographers is an ill-structured learning and teaching environment. Research reveals behavioral engagement, otherwise known as observational learning, is considered the most powerful form of learning. A closer look at the stages of behavior engagement and the power of inquiry highlights how an individual comes to acquire, construct and use knowledge. This review presents a teaching framework as a solution for educational instruction and planning in clinical education. Details of the difference between the master and novice approach to sonographic reasoning and interpretation is shared.

## **Methods**

There were twenty-one novice and thirty-five master sonographers surveyed along with field observations over three clinical semesters. Master sonographers were identified as having five or more years of experience in teaching and scanning. The association between structured and ill-structured learning environments was also considered. Survey assessments were conducted requiring analysis of case images from novice learners and master sonographers. A design team was formed consisting of novice learners, clinical site teachers, and program faculty to analyze the data and construct a viable framework.

## **Results**

Sonography students are flooded with an enormous amount of information in a short amount time. They are expected to quickly adapt and exhibit confidence and professionalism during stressful times. How the master teacher and novice learner interact with problems and case scenarios explains the gaps of what successful teaching and learning looks like. The comparison revealed, the novice learner is focused on process, and just taking the image; while the master works effortlessly and counts on experience and predictions. Further, the master looks at the whole picture; while the novice adheres to rules and patterns.

## **Conclusion/Discussion**

The results of the survey and observations were utilized to design a teaching framework with multiple stages for closing the gap between the master and novice learner.