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3-28-2024

## Using Evidence-Based Practices to Improve Sonography Scan Lab Instruction: Peyton's 4-Step Approach

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### Recommended Citation

Wampler, Kathryn and Michael, Kim (2024) "Using Evidence-Based Practices to Improve Sonography Scan Lab Instruction: Peyton's 4-Step Approach," *Innovations in Health Sciences Education Journal*: Vol. 1 : Iss. 4 , Article 16.

Available at: <https://doi.org/https://doi.org/10.32873/unmc.dc.ihsej.0053>

This original report is available in Innovations in Health Sciences Education Research Journal:  
<https://digitalcommons.unmc.edu/ihsej/vol1/iss4/16>

# Using Evidence-Based Practices to Improve Sonography Scan Lab Instruction: Peyton's 4-Step Approach

15

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<https://doi.org/10.32873/unmc.dc.ihsej.0053><https://digitalcommons.unmc.edu/ihsej/>

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Poster presented at the 2024 Spotlight on Scholarship at the University of Nebraska Medical Center, Omaha, Nebraska.

## Abstract

**Objective:** The purpose of this study was to examine the effects of implementing Peyton's 4-Step Approach for skills teaching of sonography laboratory instruction in the first semester of a diagnostic medical sonography (DMS) program. **Materials & Methods:** Participants included DMS students enrolled at UNMC during the fall semester of academic years 2020 and 2021. Data was collected through pre- and post-lab surveys completed by the DMS students. During weekly scan lab sessions, DMS faculty modeled Peyton's 4-Step Approach to skills training: Step 1: Demonstration, Step 2: Deconstruction, Step 3: Comprehension, and Step 4: Performance. **Results:** The pre-lab survey found that no DMS students (n=0/26) had prior experience with Peyton's 4-Step Approach for skills teaching. The post-lab survey found 88% (n=15/17) of DMS students agreed Peyton's 4-Step Approach to lab instruction aligned with their learning style. For Step 1 (demonstration), 82% (n=14/17) of DMS students routinely watched the pre-lab video prior to lab and 82% (n=14/17) found the videos helpful in learning the scan lab skills. 88% (n=15/17) agreed the live, instructor demonstration with spoken description in Step 2 (deconstruction) was helpful. For Step 3 (comprehension), 88% (n=15/17) agreed the live instructor demonstration guided by student spoken description was helpful. Of the steps used in Peyton's approach, 88% (n=15/17) responded that Step 4 (performance) was most beneficial, while 12% (n=2/17) responded that Step 3 (comprehension) was most beneficial. **Conclusion:** Implementation of Peyton's Approach improved sonography lab instruction in the first semester of a DMS program. This technique standardized teaching processes and DMS students found all steps to be helpful in learning lab skills. While performance or "hands on" step was considered the most helpful, students found all steps were beneficial for learning sonography skills.

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