

Abstract

Purpose: Development of a crisis management boot camp for SRNAs to increase knowledge, technical skills, and self-confidence in the management of select perioperative emergencies.

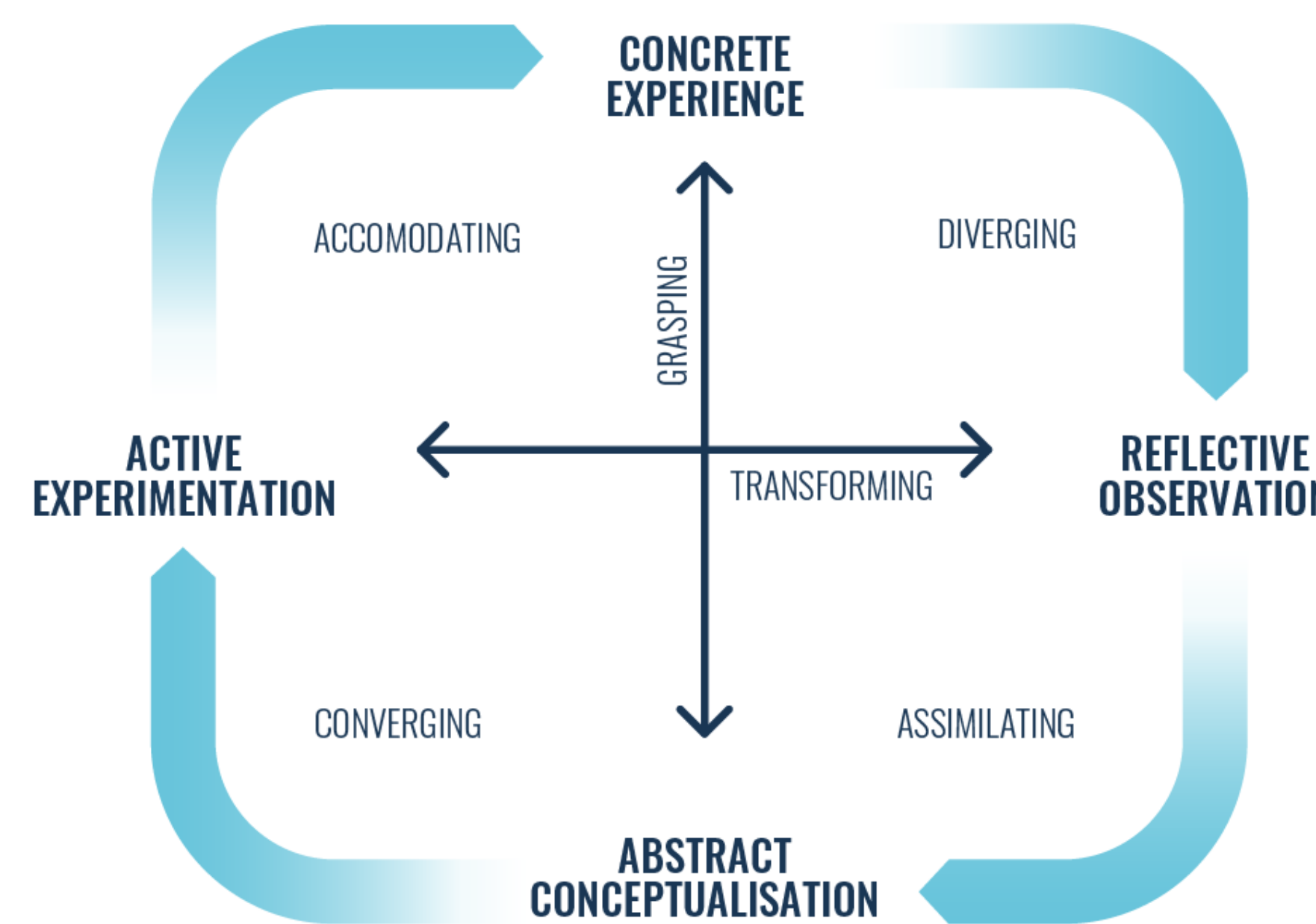
Design: Pre-intervention survey to establish baseline competence and confidence levels of the SRNAs. Education module completion, followed by simulation. Post-intervention survey to evaluate successfulness of learning and completion of the boot camp.

Methodology: Project data will be obtained from pre- and post-intervention surveys, which will then be compared using an independent t-test to determine statistical significance.

Conclusion: Findings indicate statistically significant increase in participant knowledge, competence, and self-confidence following boot camp workshop simulation experience.

Theoretical Framework

- Kolb's Theory of Experiential Learning
 - Conversion of experiences into learning
 - Divided into 4 phases that move in a cyclical fashion to allow continual modification of learning through new experiences



Methodology

- Sample population = UWO 2024 and 2025 cohort SRNAs
 - 15 and 17 SRNAs respectively
- Emergency scenarios included anaphylaxis under GA, amniotic fluid embolism, LAST, and peripheral nerve block complications.
- Pre-intervention Likert Scale survey completed to determine baseline knowledge, competence, and confidence levels.
- E-learning PowerPoint module containing didactic information and cognitive aids, checklists, algorithms, etc. distributed and completed by participants prior to simulation.
- Identical Likert Scale survey was completed post-simulation to evaluate self-perceived successfulness of learning via boot camp experience model.

Introduction & Background

- Intraoperative emergencies are relatively uncommon events – low incidence, high-stakes situations.
- Immediate recognition with prompt intervention and treatment is imperative to prevent adverse patient outcomes.
- The gap between cognitive and experiential learning hinders the opportunity for the SRNA to gain critical crisis management experience, a vital component of the anesthesia profession.
- Exposure to the anesthetic management in a safe, simulation-based learning environment is crucial to building a solid foundation of crisis management skills and self-efficacy in the SRNA.
- Establishment of a boot camp workshop allows the SRNA the opportunity to solidify didactic knowledge with practical skills.

Review of Literature

Simulation-Based Learning:

- Simulation learning style allows participants to learn cognitively, practice technical skills, and gain non-technical skills in a single experience (Berger-Estilita et al., 2021).
- Completion of e-learning modules prior to simulation-based education is equivalent, or even superior to, traditional learning modalities due to the ability of the learner to progress at their own pace (Sanchez-Novas et al., 2020).

Boot Camp Workshops:

- Defined as “brief, focused course designed to enhance learning, orientation, and preparation of the learner using multiple educational methods (Patel et al., 2020).
- Utilized across many fields of healthcare education.
- Journal of Education in Perioperative Medicine cites positive outcomes including improvements to participants' knowledge, self-confidence, clinical technical skills, and self-efficacy.

Cognitive Aids:

- Includes tools such as checklists, flowcharts, algorithms, mnemonics, emergency manuals (Marshall, 2013).

Results & Implications

- Mean pre-intervention survey score = 16.67 / 25
- Mean post-intervention survey score = 22.16 / 25
- Data analysis of pre- vs. post-intervention survey scores via an independent samples t-test resulted in a p-value of <0.001, indicating statistical significance.
- Successful increase in SRNA self-perceived levels of knowledge, confidence, and competence.
- Potential to incorporate bootcamp-style simulations into SRNA doctoral education to ensure ample opportunities and exposure to high acuity, low incidence events in a learning simulation environment.
- Incorporation of cognitive aids into both didactic and simulation throughout SRNA education to increase familiarity and reinforce knowledge.

PICOT Question

Among student registered nurse anesthetists (SRNA) at University of Wisconsin Oshkosh (P), does the completion of a crisis management and emergency preparedness boot camp and simulation (I) compared to the lack of boot camp experience (C) increase the SRNA's confidence and self-perceived ability to perform in given high-stress emergency clinical scenarios (O) during their anesthesia training (T)?

References

References available via QR code.

