Southern Illinois University Edwardsville

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# Critical Care Orientation Escape Room

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## Executive Summary

## Introduction of the Problem

Newly licensed Registered Nurses (RNs) may feel anxious and incompetent when transitioning between academia and the realities of an initial clinical staff nursing position (Graf, Jacob, Twigg, & Nattabi, 2020; Greenway et al., 2019). The gap between theory and practice is ever-widening as the complexity of the healthcare system increases and changes (Adams et al., 2018; Diaz et al., 2020; Hadenfeldt et al., 2020). One process to lessen the theory-practice gap is to implement orientation modalities that are engaging, realistic, immersive, and meaningful (Adams et al., 2018; Diaz et al., 2020; Garwood, 2020; Gates & Youngberg-Campos, 2020; Gómez-Urquiza et al., 2019; Kinlaw, 2020; Malicki et al., 2020; Mullen & Seiler, 2019; López-Belmonte, Segura-Robles, Fuentes-Cabrera, & Parra-González, 2020; Smith & Paul, 2020; Woodworth, 2021). An Educational Escape Room during hospital-wide Intensive Care Unit (ICU) RN Orientation provides an opportunity for newly hired nurses to practice a myriad of skills in a risk-free environment to better prepare them for the demands of the clinical setting (Adams et al., 2018; Backhouse & Malik, 2018; Dahlke, Hunter, & Amoudu, 2020; Garrison, Colin, Lemberger, & Lugod, 2021; Garwood, 2020; Gates & Youngberg-Campos, 2020; Hadenfeldt, Naylor, & Aufdenkamp, 2020; Hawkins, Wiles, Tremblay, & Thompson, 2020; Jantzen, 2019; Kinlaw, 2020; Mullen & Seiler, 2019; Rosenkrantz et al., 2019; San Martin, Walsh, Santerre, Fortkiewicz, & Nicholson, 2021; Smith & Paul, 2020).

## Literature Review

The theory-practice gap is defined as a disparity between clinical practice and academic theory (Greenway, Butt, & Walthall, 2019). Based on Kramer's Reality Shock Theory, newly graduated nurses traversing this gap report feelings of stress, anxiety, rejection, and frustration as

they try to reconcile differences in what they learned in school with what they're experiencing in the ever diversifying and complicated clinical arena (Kramer, 1974).  The majority of these newly graduating nurses belong to generations that value creative multimodal education opportunities that require them to collaborate and work as a team (Gates & Youngberg-Campos, 2020; Guckian et al., 2020; Mullen & Seiler, 2019). Hospital Clinical Education Specialists must adapt transition to practice training to best align with the needs of the newly hired staff to best prepare them for practice and increase their confidence and safety.

In Educational Escape Rooms small groups of learners complete tasks and puzzles to meet specific learning objectives set by the facilitators. Educational Escape Rooms capitalize on the use of gamification, immersion, and active-learning strategies to promote participant engagement (Adams et al., 2018; Backhouse & Malik, 2018; Diaz et al., 2020; Garrison et al., 2021; Garwood, 2020; Gates & Youngberg-Campos, 2020; Gómez-Urquiza et al., 2019; Gordon et al., 2019; Guckian et al., 2020; Hawkins et al., 2020; Kinlaw, 2020; Mullen & Seiler, 2019; López-Belmonte et al., 2020; Rosenkrantz et al., 2019; San Martin et al., 2021; Zhang et al., 2018). Educational Escape Rooms can test all learning domains and increase knowledge synthesis and retention by requiring learners to draw on previous learning and make meaningful connections between theory and practice (Adams et al., 2018; Bucklin et al., 2021; Clauson et al., 2019; Diaz et al., 2020; Garrison et al., 2021; Garwood, 2020; Gates & Youngberg-Campos, 2020; Gómez-Urquiza et al., 2019; Guckian et al., 2020; Hadenfeldt et al., 2020; Hawkins et al., 2020; Kinlaw, 2020; Morrell et al., 2020; Mullen & Seiler, 2019; Rosenkrantz et al., 2019; San Martin et al., 2021; Smith & Paul, 2020; Zhang et al., 2018). Educational Escape Rooms also foster the development of soft skills like teamwork, communication skills, and time management, leading to increased confidence (Adams et al., 2018; Backhouse & Malik, 2018;

Bucklin et al., 2021; Clauson et al., 2019; Dahlke et al., 2020; Diaz et al., 2020; Garrison et al., 2021; Garwood, 2020; Gates & Youngberg-Campos, 2020; Gómez-Urquiza et al., 2019; Gordon et al., 2019; Guckian et al., 2020; Hadenfeldt et al., 2020; Hawkins et al., 2020; Kinlaw, 2020; Morrell et al., 2020; Mullen & Seiler, 2019; López-Belmonte et al., 2020; Rosenkrantz et al., 2019; San Martin et al., 2021; Smith & Paul, 2020; Zhang et al., 2018).

**Project Methods**

The purpose of this quality improvement project was to create and pilot an Educational Escape Room in order to satisfy the need for an engaging and immersive teaching modality to better facilitate newly licensed nurses' negotiation of a widening theory-practice gap. The objectives within the Educational Escape Room were identified in collaboration with stakeholders in the hospital Clinical Education and Quality and Safety departments and included that the newly licensed hires would safely administer medications, practice teamwork, utilize safety mechanisms and reference materials to prevent medication errors, and utilize critical thinking skills.

The project went live in June of 2021. Eighty-three newly hired nurses entering the Neonatal Intensive Care Unit, Pediatric Intensive Care Unit, Cardiac Intensive Care Unit, or Emergency Department participated in the Educational Escape Room in 2021. In January 2022, the program was expanded to include newly hired nurses from all departments hospital wide.

**Evaluation**

Two data sets provide a mechanism to evaluate the outcomes of this project. First, all participants completed a Casey Fink Graduate Nurse Survey prior to participating in the Escape Room Educational Intervention. This tool measures confidence in practice and various measures of job satisfaction. To evaluate change in response over time, the participants repeated the Casey

Fink Survey six months and one year following the intervention. In addition, participants complete a short survey immediately after engaging in the Escape Room intervention to evaluate the objectives of the intervention. Casey-Fink survey results from the June 2021 hire group showed an increase in aggregated confidence at the six-month mark post hire. All nurses would have attended ICU orientation and completed unit-based orientation at six months post hire.

All learners agreed that the Educational Escape Room tested their ability to identify and perform interventions of safe patient care, work as a team member, administer medications using the Rights of Medication Administration, utilize safety mechanisms in place to prevent medication administration errors, utilize reference materials to ensure safe medication administration, and utilize critical thinking skills. Of all participants, 99.1% felt that the Educational Escape Room was an engaging teaching strategy, 100% agreed that they were required to remember and apply knowledge gained from orientation classes to complete the Educational Escape Room tasks, and 97.3% shared that they felt more confident about medication administration on their unit.

Several participants voluntarily commented about their learning experience in the Educational Escape Room. Of the 42 comments left, 40% of them used the word 'fun', 14% appreciated that the activity was interactive, and 12% utilized the word 'helpful'. See Table 1 below for other comments.

| Table 1: Direct Quotes from Evaluations |
|---|
| So much fun! I felt engaged and my competitive side came out. Fun teamwork and teaching each other. |
| The escape room is fun and engaging and an easy way to remember simple things that otherwise would be easy to forget! |
| I liked participating in the escape room! It was a fun and light-hearted way to review the information we learned yesterday! It was also nice to work together with other people! |
| Super interactive and makes you stop and think! |
| Great tool! Fun and creative, really helps drive home the lesson. |
| It was fun and interactive and great for hands on learning! Great idea! |

I loved this activity! Such a fun way to reinforce everything we've already learned and practice skills in a fast-paced manner, much like it would be in a critical care situation. This station was probably my favorite. It's a great way to learn hands on while making it engaging. 10/10 recommend!

One limitation of this project was the presence of uncontrollable environmental factors that could potentially be affecting new graduate confidence scores including, but not limited to, unit-based nursing shortage resulting in heavy patient assignments and under-prepared preceptors. These factors and others might skew reported self-confidence results in these newly graduated nurses during all phases of data collection. Another limitation is that this project did not measure changes in patient outcome data or rates of medication administration errors involving newly graduated nurses. Future research should look at the relationship between gamification and active-learning teaching strategies and the effects of knowledge retention and synthesis on nursing practice.

**Impact on Practice**

The project's immediate impact on the clinical site included high learner engagement, increased knowledge synthesis and retention, and increased confidence in safe medication administration per the survey results data. The predicted long-term impact of the project includes increased confidence in newly graduated nurses at six- and twelve-months post-intervention. Continuous and thoughtful evaluation will be needed to ensure the Education Escape Room content continues to be accurate and effective in meeting the safety educational needs of new hires. Project stakeholders in the clinical education department, hospital pharmacy, and unit leadership groups will need to remain closely involved in the planning and revision of this educational initiative as hospital safety changes occur to keep the program relevant and accurate.

**Conclusions**

The data gleaned from the post-Escape Room survey indicates that the intervention was highly engaging and supported newly licensed nurses' confidence in medication administration as they transition from academia into practice. The Educational Escape Room model can also be adapted and utilized in multiple units and departments for content reinforcement and competency validation. More research is required to better understand Educational Escape Rooms, gamification, and other active-learning strategies' impact on patient outcomes, new hire confidence, and job satisfaction.

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