**Nursing Education Research Conference 2020**

**Cultivating Graduate Nurses’ Knowledge of Pathophysiology Through Gamification**

Julia L. Rogers, DNP
College of Nursing, Purdue University Northwest, Hammond, IN, USA

**Purpose:** The purpose of this study is to determine if the integration of gamification in advanced pathophysiology classes improves graduate nursing students’ comprehension of physiologic processes that occur in a disease state, as well as, provide a more enriched learning environment. The second purpose is to determine if on-line students have the same results as face-to-face students using gamification techniques.

**Methods:** A quasi-experimental study design will be used. Data will be collected from a questionnaire at the end of the semester using a 5-point Likert scale on course evaluations. Five pathophysiology exam scores from students enrolled in the advanced pathophysiology class from August 2018 through December 2018 will be compared to the same five-body system exams given to students enrolled in the advanced pathophysiology class between August 2019 through December 2019.

**Results:** The results will be evaluated in December 2019 at the conclusion of the semester, by comparing the test scores of the current semester with those from the fall 2018, as well as, reviewing the students’ evaluations of the course content.

**Conclusion:** This project will be implemented in the fall of 2019 in the advanced pathophysiology class to both the on-line students and the face-to-face students. The end goal is to enrich graduate nursing students’ education through an innovative pedagogical approach. Emerging technology has allowed nursing students to interact, collaborate, and learn using various platforms. Gaming techniques, such as simulation, are by in large developed for undergraduate nursing students to practice critical thinking, clinical decision-making, and skills in a controlled environment. Appealing to students is the use of gamification in the classroom. Several gaming methods have been studied and proven as an effective pedagogical method to engage learners, form collaborations, and elevate students’ attitudes toward learning. Some modern ideas of gamification techniques include the use of an escape box to unlock an evolving case study, playing a unique version of the board game Risk to understand the immune system, and simulation enriched learning scenarios about distinct disease processes.

Pathophysiology is a critical graduate level course for nurses wanting to obtain their advanced practice degree as a nurse practitioner or clinical nurse specialist. However, pathophysiology has been historically taught as a lecture based class, where students are required to absorb information and are then tested on the content. Recent evidence reveals that the use of gamification in a pathophysiology class stimulates students’ interest in the physiological processes that cause disease, which in turn, provides students a deeper understanding of the content. When students are able to comprehend a disease process, they are more adept in retaining the information.

---

**Title:**
Cultivating Graduate Nurses’ Knowledge of Pathophysiology Through Gamification
Keywords:
Gamification, Graduate Nursing and Pathophysiology

Abstract Summary:
The use of gamification in a pathophysiology class stimulates students’ interest in the physiological processes that cause disease, which in turn, provides students a deeper understanding of the content. When students are able to comprehend a disease process, they are more adept in retaining the information.

References:
Author Summary: Julia Rogers, DNP, RN, CNS, FNP-BC is an Assistant Professor at Purdue University Northwest and practices as a nurse practitioner at Northwest Indiana Nephrology Associates. Dr. Rogers currently serves as the Leadership chair for Sigma Theta Tau Zeta Epsilon Chapter and served on the American Nurses Association's Professional Advisory Panel on Workplace Incivility. Dr. Rogers’ research interests include innovative strategies in teaching using gamification, new faculty programs, and incivility in nursing.