

Cognitive Load, Scaffolding, and Pharmacology Case Studies

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Topic: Academic Nursing: Excellence & Innovation

Category: Quality Improvement/Evidence-Based Practice Project

Abstract

Background/Introduction

Pharmacology carries a high cognitive load for nursing students. With the importance of medication administration in practice and a high percentage of questions on NCLEX, understanding this material is crucial. Constructivism learning theory allows educators to reimagine teaching difficult material through active learning strategies. Scaffolding breaks down content into smaller points allowing learners to build on their mental models of concepts. To engage learners using constructivism and scaffolding, pharmacology and medical-surgical faculty collaborated to develop case studies for junior and senior students.

Purpose

The purpose of this project is to improve academic nursing, enhancing the curriculum by scaffolding challenging pharmacology content across 2 courses using innovative case studies.

Methods or Processes/Procedures

Two-part case studies were developed correlating the material covered in pharmacology and advanced medical-surgical classrooms. Case studies included frequently prescribed medications and client's names related to the specific medications. (S.T. Atin, Moxie Cillin). Case studies prompted junior level students to employ clinical judgment with medications. Senior level students were expected to apply previous knowledge of medications to adverse reactions and complex problems. Case studies were used during class and students collaborated in groups allowing the sociocultural aspect of scaffolding. Students completed case studies within 20 minutes and then discussed responses.

Results

This project was developed summer 2023, will be piloted fall 2023 with IRB submission. Pharmacology students will complete the first part of the case studies during the semester, then complete the second part as senior students. Current senior level students will complete both parts of the case studies.

Limitations

Senior level students will not have had the benefit of case studies during their pharmacology course, and will complete both parts of the case studies during their senior semester.

Conclusions/Implications for Practice

By experiencing an innovative case study approach and scaffolding of pharmacology content, students are actively engaged in the learning process, moving complex material into long-term memory.

Biography

Vicki Talbot is a Senior Instructor of Nursing at Queens University of Charlotte. Her research interests include , clinical practice, learning theories, simulation, and interfaith concepts. She has taught advanced medical surgical nursing in the classroom and in simulation for 10+ years. Talbot has also taught pharmacology and is collaborating with the current pharmacology teacher, Dr. Catherine Baxter, to scaffold these concepts. Talbot received the Hunter-Hamilton Love of Teaching Award in May 2022, which is the highest teaching award given at Queens University.

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