Just-in-Time Teaching and Technology to Enhance Student Learning in Lab

Katilya Ware, PhD, RN
Sarah Watts, PhD, RN
CONFLICTS OF INTEREST AND DISCLOSURES

The presenters indicate that they do not have any real or perceived vested interest that relate to this presentation.
Nursing Education and Knowledge Transfer

• Nursing students are challenged with application of critical thinking as they transfer knowledge from previous semesters as they progress within the nursing curriculum.

• According to Candela (2016), it is through learning experiences that students develop critical thinking skills and the ability to reason.

• Educators are challenged with creating learning experiences that allow them to assess gaps in knowledge as students progress in the curriculum and ensure that graduates are ready for professional practice.
What is Just-in-Time Teaching?
Just-in-Time Teaching (JiTT)

• JiTT achieves the three critical factors necessary for student success in higher education:

  • Student-student interaction
  • Student-faculty interaction
  • Time on Task
Problems that Led to Implementation

• Clinical instructors frequently reported nursing students in a senior-level, advanced medical-surgical nursing course experienced difficulty in identifying cardiac rhythms in the clinical arena.

• In response, faculty redesigned the learning activity in the course to enhance student learning by using a blended approach with JiTT and technology.
Methods

• Participants were fourth semester senior level baccalaureate nursing students enrolled in an advanced medical-surgical nursing course

• Implemented during a cardiac dysrhythmias skills lab session

• 266 out of 269 students voluntarily participated in the study
Learning Environment
Data Collection

• Data were collected using a two part questionnaire administered at the completion of the learning activity

  • The first section contained 10 Likert scale type items that allowed students to evaluate the learning environment, learning culture, content, and the instructor in the role of a professional education

  • The second section consisted of four open ended questions that allowed participants to provide additional feedback
Examples from the learning activity
Please use the word bank in which you have been provided to identify each cardiac dysrhythmia. Record your answer choice on the line that corresponds with the cardiac dysrhythmia displayed on the screen. You will be allotted two minutes to interpret each dysrhythmia. You may choose to work individually or in your group at your assigned monitor to complete the learning activity. Enjoy the learning activity!
Rhythm #3
Rhythm #12
Rhythm #3

Sinus Tachycardia
Rhythm #12

Atrial Flutter

Sawtooth F Waves
Results

• The mean average for all cohorts on the first section of the questionnaire that contained the Likert scale type questions (1=strongly disagree; 2=disagree; 3=neutral; 4=agree, and 5=strongly agree):
  • Flexibility of the learning environment = 4.6
  • Learning culture = 4.5
  • Intentional content = 3.7
  • Professional Educator = 4.8
Results
(continued)

• Themes derived from open-ended questions in section two of the survey were captured in five themes
  • The instructional approach was:
    • flexible;
    • student-centered;
    • interactive;
    • provided clarity; and
    • assessed prior knowledge
Conclusions

• Students reported using JiTT and technology in the active learning classroom was beneficial and helped them gain a greater understanding of cardiac rhythms.

• Incorporating technology and creative approaches to teaching in active learning environments are student-centered and enhance student learning through peer-to-peer interaction and instructor-student interaction.