THE USE OF CASE STUDIES AND SMART DEVICE APPS TO INCREASE STUDENT ENGAGEMENT

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Introduction
The purpose of this project is to demonstrate to educators how to incorporate technology-based instruction methodologies with the utilization of smart device apps and case studies throughout a nursing course.

Setting
• Classrooms at Pre-Licensure Bachelor of Science in Nursing (BSN) Campus
• Remote (personal laptop and devices)

Approach
In an eight week BSN course, an online case study approach was used to assist students with critical thinking and retention of obstetrical concepts. “Zeondra” and “Aria,” both just weeks into their pregnancies, were introduced during the first lesson within the course case studies. They progressed throughout the course to deliver healthy babies and complete their journey as new postpartum family units. Along with case studies, the instructor implemented use of a free app and progressive virtual case studies as supplemental methods for digital learners both within and outside the classroom, supported (Flood & Commendador, 2015).

During the course, each student:
• Used simple registration instructions to enter a virtual pregnancy
• Explored various gestational stages of the pregnancies and weekly class discussions centered on progression of the virtual pregnancy
• Received text message alerts on changes to the virtual baby via their laptops and telephones
• Had access to videos of all aspects of the baby’s development in the womb
• Shared what they learned about expectations and appropriate care of a real pregnant patient in the clinical setting
• Explored multi-cultural lives of the pregnant women and choices they made via scenarios and how their patients’ choices would impact their pregnancies

The fetal kick count became an interactive learning moment. The “kick” was simulated by a specific bodily activity. Students applied a “kick” to the app’s tracker every time the kick occurred in a 24-hour period. The app alerted the user to evidence-based obstetrical teaching that should occur if ten kicks were not elicited over a two-hour time period. Teaching included engagement in activities such as walking, drinking a large glass of water or eating a small snack and notifying the healthcare provider if less than ten kicks occurred after one hour of the activity. With active involvement by using the smart device (laptop/smart phone), an increase in student responsiveness and engagement was observed.

Results
Despite limitations that included technology glitches for some of the interactive activities, the case study approach offered a positive, creative, interactive and exciting opportunity for students to practice what they learned from their textbooks and apply it to their virtual patients and their virtual pregnancy. Students were engaged in a progression within the course via the case studies. The use of the tools on the pregnancy app fostered real-life experiences for a virtual pregnancy through safe experimentation and participation. Text messages provided for continued learning outside the classroom environment.

Discussion
The inclusion of a pregnancy app and progressive case study approaches provided students with an interactive and fun way to learn their maternal child concepts. To continuously improve teaching strategies, student learning outcomes and professional growth, faculty should consider using contemporary tools that utilize technological application to actively engage the digital learner of today.

References