"We've Flipped!" Innovative Teaching Methods: The Flipped Classroom

WINONA STATE UNIVERSITY ROCHESTER

MIECA VALEN, DNP, RN, FNP-BC
KIMBERLY LANGER, MS, ACNP-BC
LISA SCHNEPPER, PHD, RN, FNP-BC

Session Objective

▶ Participants will be able to explore innovative uses of technology utilizing a "flipped" classroom format to enhance and foster student self-efficacy in learning, development of critical thinking skills, and diagnostic reasoning.

WSU Program

▶ Predominantly face-to-face program
  ▶ FNP, AGPCNP, AGACNP, AGCNS, NOL, NE
  ▶ MS and DNP
▶ Core nursing courses offered face-to-face one semester with alternate semester hybrid (4 synchronous meetings per semester)
▶ NP focus courses offered face-to-face
  ▶ Student population preference
  ▶ Flipped classroom implemented in the NP focus courses

WINONA STATE UNIVERSITY ROCHESTER

What is a Flipped Classroom?

- Typical lecture and homework/discussion elements of course are flipped
  - Active student learning
  - Personalized guidance and interaction of faculty and students
- Changes what students are responsible for when they enter the classroom
  - Students expected to come to class prepared to actively participate in activities related to current content
  - Shift from learning content during classroom time to working toward clinical application of content

"5 Reasons Flipped Classrooms Work" - Millard 2012

- Increases student engagement
- Strengthens team based skills
- Offers personalized student guidance
- Focuses classroom discussion
- Provides faculty freedom

What is the evidence supporting a "flipped classroom"?

- Originated for use in high school science classes.
- Limited evidence on use in higher education
- Graduate student performance in learning CV, respiratory, and renal physiology
  - Tune, Sturek, & Basile (2013)
- The enhanced flipped classroom, student recorded lectures
  - Talley & Scherer, 2013
- Use in undergraduate nursing education to improve satisfaction and performance
  - Missildine, Fountain, Summers, & Gosselin, (2013)
- Use in Graduate Nursing Education
  - Critz & Knight (2013)

How it works – before class

- iPad Mini pilot program
  - Useful in classroom and clinical experiences
  - Nearpod
  - Pages
  - Evernote
  - Multiple apps for use in the clinical setting
- Lectures pre-recorded
  - Tegrity, Adobe Presenter, Voice-over powerpoint
  - Other options: Camtasia, SoftChalk, YouTube, Wikis
  - Ability to review content for clarity

How it works – in class

- Maximizes use of face-to-face student-faculty interactions
- Classroom activities
  - Synchronous on-line quizzes on iPad
    - Nearpod
  - Case studies – instructor and/or student-led
  - EBP review of pertinent research
  - Development of management plans
  - Workshop approach (gyn lab, suture lab, MSK and physical assessment development)
- Guest speaker content presented in standard lecture format

Student Evaluations

- Love it or Hate it
- "I prefer the standard lecture format"
- "There were too many technology problems with getting the lectures ahead of class time"
- "too much material at once"

Student Evaluations

- "We get more out of class because we come more prepared"
- "appreciated having lectures pre-recorded to allow class time for case studies and other activities"
- "It was great to have the "flipped classroom". Even though it was more work to prepare for class, I felt more confident in the material because of the great discussion we could have in class since we had already done the readings and listened to the lectures."
- "interactive case studies allow the student to remain more focused during the class time . . . Given participation is required to make plans of care . . ."
- Pre-recorded lectures allow time for review of content and preparation of questions prior to class

Faculty perspective

- Intensive preparation
  - Lecture AND interactive activities
  - Always need to be a couple weeks ahead!
  - Learning new technology
- Noticed a difference in overall class testing scores compared to previous years
  - Possibly related to which students are preparing prior to class
  - Need to reinforce critical content
- Flipped classroom shifts more responsibility to the student for learning

Future plans

- Immediate on-line quiz available with pre-recorded lecture to identify content areas of concern
- Consistent recording format
- "Personal response system"
  - Use of immediate polling with use of apps (Nearpod & others)
- Workshop development

References & Resources

- Bergmann, J. & Sams, A. (2014). Flipped Learning. Maximizing Face time. *Learning and Development Feb*: 28-31.
- Critz, C. & Knight, D. (2013). Using the Flipped Classroom in Graduate Nursing Education. *Nurse Educator, Vol. 38,* No. 5; 210-213.
- Herreid, C. & Schiller, N. (2013). Case Studies and the Flipped Classroom. *Journal of College Science Teaching Vol. 42, No. 5:* 62-66.
- Mangan, K. (2013). Inside the Flipped Classroom. *Chronicle of Higher Education, 00095982*, Vol. 60, Issue 5
- Millard, E. (2012). 5 Reasons flipped classrooms work. *UniversityBusiness.com*, 26-29.
- Missildine, K., Fountain, R., Summers, L. & Gosselin, K. (2013). Flipping the Classroom to Improve Student Performance and Satisfaction. *Journal of Nursing Education. Vol. 52, No.* 10; 597–591. doi:10.3928/01484834-20130919-03
- Talley, C. & Scherer, S. (2013). The Enhanced Flipped Classroom: Increasing Academic Performance with Student-recorded Lectures and Practice Testing in a Flipped" STEM Course. *The Journal of Negro Education, Vol. 82, No.3.*
- Tune, J., Sturek, M. & Basile, D. (2013). Flipped classroom model improves graduate student performance in cardiovascular, respiratory, and renal physiology. *Adv Physiol Educ 37*: 316–320; doi:10.1152/advan.00091.2013.