Democratizing Nurse Practitioner Student Education: Promoting student & faculty participation in flipped learning.

Howard University Graduate Nursing Program

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Flipped Learning Lecture

Objectives

1. Define the basic components of flipped learning.
2. Outline the educational theories congruent with flipped learning.
3. Describe the evidence-base for flipped learning in nursing education.
4. Identify flipped learning implementation challenges at the student, faculty, and university level.
5. Differentiate between various types of Active Learning Activities.
6. Discuss flipped learning study that was conducted with faculty and students at Howard University’s Family Nurse Practitioner Program.
Definition: Flipped Learning

“A pedagogical approach in which direct instruction moves from the group learning space to the individual space.

The resulting group space is transformed into a dynamic, interactive learning environment

Where the educator guides students as they apply concepts and engage creativity in the subject matter.”

Flipped Learning Network (FLN)
http://flippedlearning.org
4 Pillars of Flipped Learning

- F: Flexible environment
- L: Learning Culture
- I: Intentional Content
- P: Professional Educator

http://flippedlearning.org
Components of Successful Flipped Learning Environment

- Collaboration
- Student-centered learning
- Adequate time for implementation and support from administrators
- Support from Information Technology
- Thoughtful reflection


Student studying and preparing remains paramount
https://blog.stileeducation.com/stileeducation-blog/2015/5/20/flip-in-stile-part-3-recording-and-editing-your-videos
Educational Theories Congruent with Flipped Learning

- A range of learning theories have been identified as congruent with flipped learning.
- Hawks (2014) refers to using both behaviorist principles outside the classroom (more focus on the individual) and constructivist tenets (collaborative work, more frequent assessment) within the classroom.
- Baker, (2013, p. 23) has associated the education theories of Bloom, Bandura, Vygotsky & Maslow as being commensurate with flipped learning.


Nursing Education

**Must Be Driven By:**
- Science/critical thinking/skills of analysis (Institute of Medicine, 2011, p. 598)
- Civic professionalism/democratic professionalism (Murphy, 2015; Sullivan, Benner & Shobe, 2005; Thompson, et al., 2013)
- Social Justice Practices (Kagan, Smith, & Chinn, 2014; Murphy, 2015; Thompson, 2014)
- Ethical knowledge, professional responsibility, and application (Grace, 2018)
- Multiple ways of thinking with an emphasis on clinical reasoning across time and varying clinical scenarios (Benner, 2015).

**Must Produce:**
- Deep learning as opposed to superficial learning, where students know how and why knowledge is relevant (Benner, 2015).
References: Nursing Education


Evidence-Base for Flipped Learning

- There is promising evidence about flipped learning in a range of health care disciplines (McLean, et al., 2016; McLaughlin, et al., 2014; Moraros, et al., 2015; Mortensen & Nicholson, 2015).

- A systematic review of flipped learning in nursing education reported neutral or positive academic outcomes and mixed results for satisfaction as well as a range of challenges. (Betihavas, et al., 2016).

- Betihavas, et al., (2016) identified the need for future research to evaluate the implementation process, pre- and within class active learning strategies, and outcomes of flipped learning (p. 20).

- Despite limited evidence about flipped learning in nursing education, the above authors of the systematic review agreed it offers transformational potential for nursing education (p. 20).
References: Evidence Base for Flipped Learning


A number of papers have addressed flipped learning in nurse practitioner student education (Critz & Knight, 2013; Hawks, 2014; Hessler, 2016, Mudd & Silbert-Flagg, 2016).

They provide much needed information about innovative in-class active learning activities, along with identifying student, faculty, and university challenges.


Mudd, S., & Silbert-Flagg, J. (2016). Implementing the flipped classroom to enhance nurse practitioner clinical decision-making in the care of the pediatric asthma patient. Nursing Education Perspectives (37)6, 352-353. doi: 10.1097/01.NEP.0000000000000083
Implementation Challenges

Interdependent:
Needs, Discomfort, Ongoing Coaching/Mentoring & Evaluation

Students:
- Student engagement
- Student pre-class preparation time
- Other: resources, recognizing learning type and expanding abilities

Considerations:
- Grading learning exercises. Amount of course credit for quizzes, case study participation, other active learning activities, to be an adequate incentive for students to do pre-class preparation?
- How best to assess students/evaluate students on a continuous basis and communicate to the students expected performance? Using examples and rubrics have been an effective strategy
Implementation Challenges

Faculty:
- Faculty engagement
- Inexperience in teaching flipped classroom
- Preparation time
- Formative & Summative Evaluation
- Nurturing deep learning and student responsibility for their own learning

Considerations:
- Figuring out how to get 3 hour lecture/Power Point presentations onto Tegrity recording?
- What happens if students do not come prepared?
- What strategies to use to engage students?
Implementation Challenges

University/Program:
- Implementation: Is implementation science theory being employed?
- Evaluation: Are valid Assessments being utilized consistently
- Resources: Finances, Training, Development, Other Support: IT, Time, Space, etc.,
- Intended/Unintended consequences/Unknowns

Considerations:
- Challenges between stated goals of the university/college/program and resources to accomplish these goals - need to keep this in view...
Active Learning Activities

- **Clinical Case Studies:**
  - Promotes learning of key concepts, development of communication skills, and application of knowledge to real life clinical scenarios and diagnoses.

- **Frequent In-Class Quizzes:**
  - Provides students and faculty with immediate feedback and identify existing knowledge gaps.

- **Think-Pair-Share**
  - Encourages critical thinking and cooperative learning.
  - Students are grouped in pairs and presented with a question. First each student thinks independently, next they articulate their ideas, consider their partner's ideas and negotiate a response, and finally present their answer.

- **Q & A Session: Submitting Questions Prior to Class**
  - Opportunity to assess individual student knowledge gaps.

- **Role Play**
  - Builds confidence by assuming roles and practicing what to say and do in a safe setting.

- **Game Based Learning:**
  - Fun learning through interactive and friendly competition which allows teaching/learning enjoyment while demonstrating and gaining knowledge.

- **Case Presentation**
  - Opportunity for reflection-on-action, disclose and practice clinical reasoning skills, receive feedback and support, correct misunderstanding / incorrect reasoning.
HOWARD UNIVERSITY
GRADUATE NURSING PROGRAM
FLIPPED LEARNING INITIATIVE & STUDY
Research Questions

1. What are the perspectives and experiences of graduate nursing faculty and graduate nursing students related to flipped learning?

2. What type and level of flipped learning practices can be applied to support students coming to class prepared to engage in active learning activities?

3. Is there a relationship between faculty and student perceptions of learning gains and academic performance?
Flipped Learning in NP Student Education: An Inside Action Research Study

- Action Research (AR) is an approach to inquiry that bridges the gap between theory and practice through reflection and inquiring into the cyclical AR processes of constructing/diagnosing, planning action, taking action and evaluating action, which are central to the development of actionable knowledge (Coughlan & Brannick, 2014, p. 8-12).

- AR, “seeks to develop and maintain social and personal interactions that are nonexploitative and enhance the social and emotional lives of all people who participate” (Stringer, 2013, p. 24).

- Not just “problem solving.” Attention to issues of power, justice, implementation, and relationships. (Murphy, 2015)

- Like nursing, AR is value-based, ethical, and concerned with care and respect for others. (McDonnell & McNiff, 2016, p. 30).

- Philosophies and practices of emancipatory nursing and social justice (Kagan, Smith, & Chinn, 2014), Black feminist thought (Lorde, 1984; Hill-Collins, 1989 – 2008), and Intersectionality (Hill-Collins & Bilge, 2016) provided the conceptual frameworks for this research.
References: Action Research & Conceptual Frameworks


Flipped Learning Training & Implementation

- 1st Faculty Training **Summer 2014**, then faculty knowledge sharing, followed by other graduate nursing faculty training.
- Student engagement: Attention to explanation, expectation, support, and available resources

**Flipped Learning Initial Implementation**
- Research - **1st Spring 2015**
- Advanced Health Assessment/Clinical Reasoning - **1st Fall 2015**
- Theory - **1st Fall 2015**
- Pediatrics - **1st Spring 2016**
- Adult - **1st Summer 2016 : Study Begins**

**Cohort Currently in Final Semester - Expected Graduation Spring 2018**
Have Had All Clinical Course Flipped, as well as Research & Theory
- Advanced Health Assessment/Clinical Reasoning - Fall 2016
- Pediatrics - Spring 2017
- Women’s Health - **1st Spring 2017**
- Adult - Summer 2017
- Older Adult - **1st Fall 2017**
- Role Seminar - **1st Spring 2018**
Flipped Learning Study: Methods

2 Data Sets in the Study: Faculty Data & Student Data

- **Faculty Data**: instructor observation, reflective journaling, debriefing sessions, learning circles, and dialogical development of thematic findings. *Begin Summer 2016 & Continues every semester through Spring 2018*

- **Student Data**: focus groups were coded and analyzed using a critical constructivist grounded theory methods approach. *3 Focus groups - 6 students each: August 2016, October 2016, February 2018*

- A group of 6 nurse practitioner students (Cohort 1) working as research assistants on the study were involved in coding of the focus groups (Cohort 2) and data analysis. *Fall 2016*

- After training in AR learning circle methods and Black feminist thought, the NP student research assistants individually reflected on multiple aspects of their identity as “minority women”, in relationship to flipped learning, using Doris Boutain’s, “Identity, Research, and Health Dialogic Interview Format,” and conducted three learning circles where they compared and contrasted their identity reflections dialogically and collectively determined themes. *Fall 2016*

Faculty & Student Results

Faculty found the flipped learning approach to be a significant improvement over traditional lecturing, particularly as it provides opportunity for continuous assessment and feedback.

Faculty determined various types of active learning activities, case studies and brief multiple choice quizzes, given either at beginning or end of class, each with a meaningful point value, successfully encouraged students to come to class prepared.

Students identified numerous advantages such as:
- Personalizing learning,
- Improving time management
- Building confidence,
- Promoting student and instructor preparation.

Students strongly prefer both audio and slide content material prior to class.

Generative tensions related to authority and control of course format surfaced.

Students identified flipped learning is supportive and culturally congruent with a range of student identities
- Flexibility related to various roles/lifestyles
- Autonomy related to being in control of own learning
- Conscious engagement related to dispelling myths of passivity
- Competency related to confidence and intelligent dialogue between student and teacher.

Academic Performance: After completing the flipped summer Adult Course, for the first time in four years the faculty teaching the Fall Older Adult course reported a 100% passing rate on the first exam.
Student’s Words on Flipped Learning

“It was magical.”

“It is a proactive approach to learning as opposed to reactive.”

“It puts learning on a new platform: it’s tangible, it helps you focus, it gives you guidance.”

“It brings out the best in you.”

“It actually encourages you to participate in your own learning.”

“It gives you more time to prepare and empower yourself.”

“It uses time in class more efficiently.”

“It forced me to speak and improved my communication.”
Results: Active Learning Activities

- **Clinical Case Studies**
  Findings:
  - Faculty had various ways of conducting and assigning point value to case studies
  - Provide Prior Scoring Rubric
    - **Example 1:** Specific case assigned to each student prior class, come to class and present, engagement of class with Q & A related to student assigned case and presentation.
    - **Example 2:** Provide diagnosis prior to class and then question students related to major domains related to interview, examination, differential diagnosis, and treatment/evaluation.
    - **Example 3:** Combination of types of case studies: take home, in class individual, in class group

- **Think-Pair-Share**
  Findings:
  - Found this to work well with lab, EKG, radiology review
Results: Active Learning Activities

- **Q & A session:**
  Findings:
  - In AHA/CR course was set as requirement, students found this to be obligatory, not very helpful

- **Role Play**
  Findings:
  - Very beneficial especially within sensitive areas/new territory: implementing Motivational Interviewing & Screening Brief Intervention & Referral to Treatment for AOD use disorders

- **Game Based Learning**
  Findings:
  - Instructor must have well organized and clear processes for answering and assigning points and a skill set to manage and maintain equity - Consider recording the class in event of disputes
  - Expounds the joy of learning, reduces monotony, even if choose not to be point based - still an effective learning and engaging strategy

- **Case Presentation**
  Findings:
  - Practice, noncompetitive, supportive, kind feedback
Discussion

- Limitations: One small study within a small graduate program with small faculty.
- Many of prior identified implementation challenges were borne out.
- Overall students and faculty are very pleased with both the process and the outcomes related to transitioning to the flipped learning method. Feeling of being on a shared mission.
- Faculty training, collaboration, and research deepened our interpersonal relationships created opportunities to exchange wisdom, struggles, successes.
- Overall significant effort, learning, and joy.
- New and innovative also tried and true.
Next Steps

Evaluation of implementation, intervention, and student outcomes