THE FLIPPED CLASSROOM METHOD: EXPLORATION OF NURSE EDUCATORS’ PERSPECTIVES USING Q-METHODOLOGY

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INTRODUCTION

• Purpose
  • Explore the perceptions of nurse educators related to the use of the Flipped Classroom Method in pre-licensure nursing programs.

• Flipped Classroom Method (FCM)
  • Innovative teaching strategy
  • Promotes student-centered, active learning

• Background
  • Continued existence of a significant classroom – practice gap
    • Benner et al., 2010; Hickerson, Taylor and Terhaar, 2016; Institute of Medicine, 2011; National League for Nursing, 2008; Theisen and Sandau, 2013
  • Teacher-centered strategies promote passive learning
  • Content saturation in pre-licensure nursing curriculum
METHODOLOGY

• Q-Methodology
  • Study of Subjectivity; the “everyday” dialogue we have with each other
  • Seeks to explore opinions (viewpoints or perspectives) and how they can impact behavior and choices individuals make

William Stephenson
(1902-1989)
THE FIVE STEPS OF Q-METHODOLOGY

1. Concourse Development
2. Q Statements and the Q Sample
3. P set and the Q Sort (data collection)
4. Factor Analysis
5. Factor Interpretation
CONCEPTUAL FRAMEWORK

- Nurse Educator's Perception of the Learner (Andragogy - Knowles)
- Nurse Educator's Perception of Own Abilities (Self-Efficacy - Bandura)
- Nurse Educator's Perception of the Flipped Classroom Method (Constructivism)

Adoption and Implementation of the Flipped Classroom Method (Diffusion of Innovation - Rogers)

Identification of Best Practices and Faculty Development needs for implementation of the Flipped Classroom Method
STEP 1: CONCOURSE DEVELOPMENT

• **Purpose:** Identify the population of viewpoints (perspectives) related to the topic being explored

• **Google Form Survey**
  • Answered four open-ended questions based on conceptual framework
  • Purposeful Sampling
    • 18 participants; identified at GANE 2015 Conference
    • Have used the Flipped Classroom Method for at least one semester in an undergraduate nursing program.
STEP 2: Q STATEMENTS AND THE Q SAMPLE

243 opinion statements

Learner Characteristics
66 statements
(14 subcategories)

Educator Characteristics
64 Statements
(14 subcategories)

Educator Skills
51 Statements
(11 subcategories)

Barriers to using the FCM
62 Statements
(9 subcategories)

18 Q Statements
22 Q Statements
14 Q statements
17 Q Statements

71 statements analyzed; 11 statements removed due to repetition

60 statements sent to content expert and Q-Methodology expert

Minor changes made based on expert feedback = 60 statements in Q Sample
STEP 3: P-SET

Main Effect Dimensions
A. Years of Teaching Experience
   1. 2 to 5
   2. 6 to 10
   3. Greater than 10

A. Type of Pre-licensure Program
   1. ASN
   2. BSN

A. Typical classroom size
   1. 0 – 60 students
   2. Greater than 60 students

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<td>Average Classroom Size for Program</td>
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STEP 3: THE Q-SORT

• An operant process in which a participant ranks and orders the statements in the Q Sample.

• “How do the issues surrounding the use of the Flipped Classroom Method (FCM) influence your decision to use or not use the FCM.”
STEP 4: DATA ANALYSIS

• Use of statistical software (PQMethod)

• Factor extraction and loading
  • The process used to find statistically significant groupings of participants who share similar viewpoints (McKeown & Thomas, 2013)

Was guided by the following criteria:

• Ability to explain as much of the variance in the correlation matrix as possible

• Minimize the number of confounding sorts (sorts loading on more than one factor)

• Minimize non-significant sorts (sorts not loading on any one factor)

• Avoidance of significantly correlated factors.
### STEP 4: DATA ANALYSIS

**Factor loadings** for a Q-sort with 60 Q-statements is **significant** if a factor loaded at greater than or equal to 0.33 \([2.58 \times \text{SE}(0.129)]\) (99% confidence interval)

- Factor 1, 2, and 3 accounted for 92% of the Q-sorts.

#### Correlations Between Factor Scores

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#### Factor Loadings Table

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#### Variance

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<td>50%</td>
<td>27%</td>
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STEP 5: FACTOR INTERPRETATION

- Model Q-Sort for Each Factor
  - Leave behind the characteristics of a quantitative study and ends with the qualitative investigation and explanation of the phenomena being studied
  - Iterative process comparing Q statements and participant’s post-sort statements written on the tabulation sheet during the Q-sort
  - Used a “CRIB SHEET” method to help with this process
RESULTS
FACTOR ONE
“I AM MOTIVATED, WILLING AND ABLE SO WHY NOT TRY IT OUT.”

• Accounts for 13 participants or 50% of the Q-sorts

Characterizing Statements

• The educator must be willing to break out of the traditional lecture mode when using the FCM. (#43, +5)

• The educator must have a desire to facilitate active learning when using the FCM. (#60; +5)

• Need to be motivated, confident and able to facilitate active learning. (#26, 28, 48; +4)

• Lack of technology skills is not perceived as a barrier to using the FCM. (#36, 57; -5)

• Perceived barriers instead include being too comfortable with tradition and not wanting to try something or fear of taking chances. (#12, 40; +2) **contrast to Factor Three**
FACTOR ONE
“I AM MOTIVATED, WILLING AND ABLE SO WHY NOT TRY IT OUT.”

• “I have met many instructors who have never progressed or embraced innovative ideas. Students have even expressed this. An educator must be willing to embrace innovation to teach this current culture.”

• “Breaking from the usual ways is the first step to flipping the classroom.”

• “Flipped classroom requires different preparation strategies on the part of the faculty member which in turn, requires a motivation and desire by the faculty to use new methods and strategies.”

• “Technology skills can be taught. Students now already have to utilize technology to get ppt slides or notes in the traditional classroom.”

• “I do not believe the prep time is more. I believe any content an educator prepares to teach requires time initially and can be expanded periodically, changed periodically, updated periodically to encourage and improve learning.”
FACTOR TWO
“WHERE DO I START AND WHAT IF STUDENTS DON’T LIKE IT?”

• Accounts for 7 participants or 27% of the Q Sorts

Characterizing statements

• The educator must be transparent as to the reason the educator chooses to facilitate a flipped classroom. (#42; +5) **Contrast to Factor Three**

• The learner needs to be more prepared when coming to a flipped class compared to a traditional class and be more accountable to their learning. (#58; +5)(#45; +3)

• FCM takes more preparation time on both the part of the nurse educator and the student. (#18, +3)

• A barrier exists related to the lack of knowledge on how to implement the FCM as well as the fear that student’s will reject the FCM (#50; +4)(#1; +3)
FACTOR TWO
“WHERE DO I START AND WHAT IF STUDENTS DON’T LIKE IT?”

• “It is of utmost importance for the educator to be honest and open regarding the reason for the use of the flipped classroom so as to gain support and buy in by students.”

• “When major change is done from one semester to another they will revolt!”

• “When the educator lacks knowledge of using and leading the FCM, this barrier will filter over to the learner.”

• “Learners should always be accountable for their own learning regardless of the mode of teaching; however, since the learn is not being ‘fed’ the information, the flipped classroom requires the learner to be more prepared.”
FACTOR THREE
“‘I’VE GOT THE SKILLS BUT TRUSTING THE LEARNER IS AN ISSUE.’”

• Accounts for 4 participants or 15% of the Q sorts

Characterizing statements

• The educator must have a creative mindset and confidence when using the FCM. (#5; +5)

• The educator must have the skills to present content in innovative ways when using the FCM. (#29; +5)

• The educator does not need to be transparent with students. (#50; -4) **Contrast to Factor Two**

• The educator does not believe that unwillingness, afraid to take chances, or lack of skills are barriers to using the FCM. (#43, 22; -3)(#12, 50; -4) **Contrast to Factor One**

• The educator is fearful they will not cover content adequately. (#35; +4)

• The educator does not trust the student will take responsibility for their learning (do outside class work and come to class prepared). (#52, 42; +1)
FACTOR THREE
“I’VE GOT THE SKILLS BUT TRUSTING THE LEARNER IS AN ISSUE.”

• “As educators, it is imperative to find ways to keep all students engaged in didactic settings. Students learn in different ways and it is our job to ready them.”

• “I don’t think that transparency has an impact on your reasoning. If you feel this teaching methodology is beneficial, then use it.” “Students do not always know what is best for them when it comes to their learning needs.”

• “Because there are so many ‘moving parts’ with the FCM, students need to be prepare, the activity has to be appropriate for the content, the necessary content can get lost, time runs out, an activity confuses students more than helps, you wonder, maybe I should have just lectured in the traditional manner.”
IMPLICATIONS

• Need time to reflect upon intentions, values and beliefs behind pedagogical decision-making which can enhance pedagogical understanding

• Flipped Classroom method, according to the participants, is worth considering for implementation

• Perceived barriers included actual implementation, facilitation and student buy in.

• Faculty development programs may be designed to address the barriers and the needs of nurse educators who desire to implement the Flipped Classroom Method
REFERENCES


• Bergmann, J., & Sams, A. (2012). Flip your classroom: Reach every student in every class every day. Eugene, OR: International Society for Technology in Education.


