



# Teaching Q Methodology to Baccalaureate Nursing Students

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## Abstract

There is a growing professional emphasize on providing patient-centered care, but teaching patient-centered research methods in nursing curricula is far from routine. Q methodology is a philosophical framework and set of techniques used to systematically study subjective attitudes, beliefs, and opinions in a way that minimizes researcher bias. Participants actively make their preferences known through a sorting process; then by-person factor analysis is used to find groups with shared viewpoints. Q methodology can be used for research, quality improvement, and program evaluation; but few nurses have a basic understanding of this mixed-method design. The purpose of this project is to describe the implementation and evaluation of a one-day class in a baccalaureate nursing research course created to increase students' awareness of Q methodology.

### Benefits of Q Methodology for Undergraduate Nursing Research



## Methods

Following a brief overview, students actively engaged in a mock Q study by generating opinion statements, known as a concourse, about their K-12 substance abuse education. Then students performed a Q sort and entered data into a web-based program. After reviewing the steps of data analysis, examples of undergraduate honor student Q methodology studies were shared with the group. Content was reinforced as students applied Q methodological principles and techniques to evaluate the class. The project was classified by the university Institutional Review Board as non-human subjects research. Students provided written responses to four evaluations questions regarding impressions of the class and the method to populate the concourse. The following week, students sorted their level of agreement with 35 subjective statements on a +4 to -4 grid. Anonymous data were analyzed with PQ Method software using centroid factor analysis and varimax rotation.

Q Methodology is a theory and set of procedures for studying subjectivity. Q Methodology is a person-centered research method to quantitatively study viewpoints used to: generate or test theory, improve quality, evaluate learning activities or program outcomes, and support undergraduate research.

Hensel, 2016; and Ramlo, 2016

## Sample Data Sorting Sheet

Most Disagree ←		→ Agree	
I find Q methodology to be very confusing	The pace of class was too fast	Following the Q methodology steps seems to simplify the process of conducting a study	The terminology needed to be better explained
I think research is overemphasized at the BSN level	I may try doing a research project using Q methodology in the future	I learned how to ask questions in a different way after today's session	I may try doing a research project using Q methodology in the future
	The PowerPoint was informative	Being able to finish the data analysis would have been beneficial	Conducting a Q methodology study seems better than doing a survey
		Doing a survey then a sort made me view them differently	
		I liked how we participated step-by-step in doing a mock study	

## Results

Thirty-three sorts resulted in a four-factor final solution that explained 45% of the variance: *General Confusion* (N=6), *Seeing Usefulness* (N=3), *Valuing Practice* (N=8), and *Ambivalence to Research* (N=11). The most favorable attitudes were found among the *Seeing Usefulness* group who perceived that Q methodology was a good way to do patient-centered research and find opinions. Overall, the interactive format (1, 1, 3, 4) and participating in the step-by-step mock study (0, 2, 4, 2) were positive aspects of the class. Perceiving that the session would have improved with prior knowledge (4, 0, 3, 3) and that there was too much to learn in one session (3, -2, 0, 4) represented areas for improvement.

## Conclusions

This was the first study to explore outcomes from teaching Q methodology to undergraduate nursing students. The findings reinforce the best teaching and learning practices of exposing students to content prior to class and using active learning strategies. What this study adds to the literature is that teaching undergraduate students about Q methodology can generate interest in alternative approaches for studying subjectivity in nursing practice. More research is needed to understand optimal content exposure.

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