



# Educating RN-BSN Online Students on QSEN Competencies of Quality Improvement

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## Abstract

The American Association of Colleges of Nursing (AACEN) promotes the knowledge and skills in leadership, quality improvement, and patient safety that are necessary to provide quality health care. The literature provides different approaches of teaching the quality and safety education for nurse (QSEN) from systems thinking (Dolansky & Moore, 2013) to clinical practice projects, lectures, and online modules (Phillips & Cullen, 2014). In the NURS 457 Leadership in Nursing course, the students develop a process improvement (PI) proposal for a nursing problem at their place of work.

The purpose of this quantitative study was to examine the knowledge, skills, and attitudes (KSAP) gap of student enrolled in online RN-BSN program at Clarion University of Pennsylvania regarding the quality and safety education for nurses (QSEN) core competencies during the NURS 457 Leadership in Nursing class. This study was approved by Clarion University of Pennsylvania IRB # 34-15-16

## The Questions

- 1) Do RN-BSN online students scores improve from pretest to post-test in safety, knowledge, skills, and attitudes of the QSEN core competencies of quality improvement?
- 2) Is there a difference in pretest to posttest scores n safety, knowledge, skills, and attitudes of the QSEN competencies for quality improvement for the RN-BSN students who take a 15-week course versus a 7.5- week course?

## MATERIALS & METHODS

At the start of the 15-week (full semester) and the 7.5 week (accelerated term) for the NURS 457 Leadership in Nursing course, students were provided an introductory letter,. This letter provided an explanation of the study with an informed consent. If the students volunteered to participate, they were provided the modified QulSKA survey to complete for the pre/post survey.

The QulSKA is a 73-item survey that measures knowledge, skills and attitude across the six core QSEN domains (patient-centered care, teamwork and collaboration, evidence-based practice, quality improvement, safety, and informatics) ( Dycus & McKeon, 2009). The results from the survey were expected to inform faculty of the development of targeted educational strategies focusing on the cognitive, behavioral, and affective needs of students in their understanding of the knowledge, skills, and attitudes of the QSEN core competencies in the Leadership in Nursing Class.

## Demographics

There were no significant differences in demographics (N=40). There were four male and 36 female participants with age ranges from 18-65 with a majority of age between 26-35 years old. The majority (n=28) had no previous quality improvement education and only five had any nursing certifications.

## The Results

Table 1  
*T-test Results for Pre/Post Test Differences in Core Competencies, n = 40*

Competency	Pretest		Posttest		t	p
	M	SD	M	SD		
Evidence based practice	38.0	5.9	43.4	12.3	3.21**	.003
Informatics	16.1	2.9	17.2	2.0	2.33*	.025
Patient-centered care	28.7	1.9	29.2	2.7	1.12	.268
Quality	39.7	5.6	48.9	6.9	7.71**	.000
Safety	39.4	5.0	41.0	4.8	1.70	.097
Teamwork & collaboration	34.0	4.0	34.6	3.1	.86	.396

\*p<.05

\*\*p<.01

Table 2  
*Independent t-test Results for Differences in Pretest Competencies between 15-Week Class and 7.5 Week Class, n = 40*

Competency	15-Week		7.5 Week		t	p
	M	SD	M	SD		
Evidence based practice	37.7	6.2	38.7	4.8	.41	.684
Informatics	16.6	2.7	14.3	3.0	2.07	.062
Patient-centered care	28.6	1.6	29.1	2.7	.75	.461
Quality	40.6	4.9	36.6	6.2	2.08*	.045
Safety	39.3	4.3	39.9	7.2	.31	.757
Teamwork & collaboration	34.5	3.5	32.3	5.2	1.44	.160

\*p<.05

## The Results

Table 3  
*Independent t-test Results for Differences in Posttest Competencies between 15-Week Class and 7.5 Week Class, n = 40*

Competency	15-Week		7.5 Week		t	p
	M	SD	M	SD		
Evidence based practice	44.1	13.6	41.0	6.1	.66	.515
Informatics	17.2	2.1	17.0	1.7	.30	.768
Patient-centered care	29.2	2.8	29.0	2.4	.19	.852
Quality	49.8	7.6	46.2	2.5	1.35	.184
Safety	41.7	4.6	38.3	4.8	1.94	.059
Teamwork & collaboration	35.1	2.5	32.9	4.30	1.94	.060



## Results

The results of this study revealed that students showed a significant difference for evidence-based practice, informatics, and quality (the QSEN core competencies) after taking the NURS 457 Leadership class.

There is no significant difference in students learning the QSEN competencies between a class that is 15 weeks in length versus a class that is 7.5 weeks in length.

Although the 15 week mean score for safety, teamwork and collaboration was slightly higher; they were only significant at the .10 alpha level. Quality was the only core domain that was significant higher between the 15 week pretest and 7 week pretest.

## Conclusions

- The teaching strategy for having students develop a process improvement (PI) proposal for a nursing problem at their employment during a leadership class enables students to learn and design new processes using the QSEN competencies.
- The existence of gaps in the curriculum related to the QSEN competencies of evidence, based practice, informatics, and quality are now removed with the existence of the process improvement project.
- As a result of this study the RN-BSN nursing faculty is currently reviewing the curriculum courses to determine the student learning outcomes and practice experience assignments.
- A limitation to this study is the amount of students who participated in this study. There was a potential of 70 participants and 40 participated for a response rate of 57%.

## References

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