

Team-Based Learning: Application in Undergraduate Baccalaureate Nursing Education

Lisa Boss, PhD, RN, ACNS-BC, CEN; Sandy Branson, PhD, MSN, RN; & Debra Fowler, PhD, MBA, RN, CNE, NEA-BC

The University of Texas Health Science Center at Houston – School of Nursing

Background

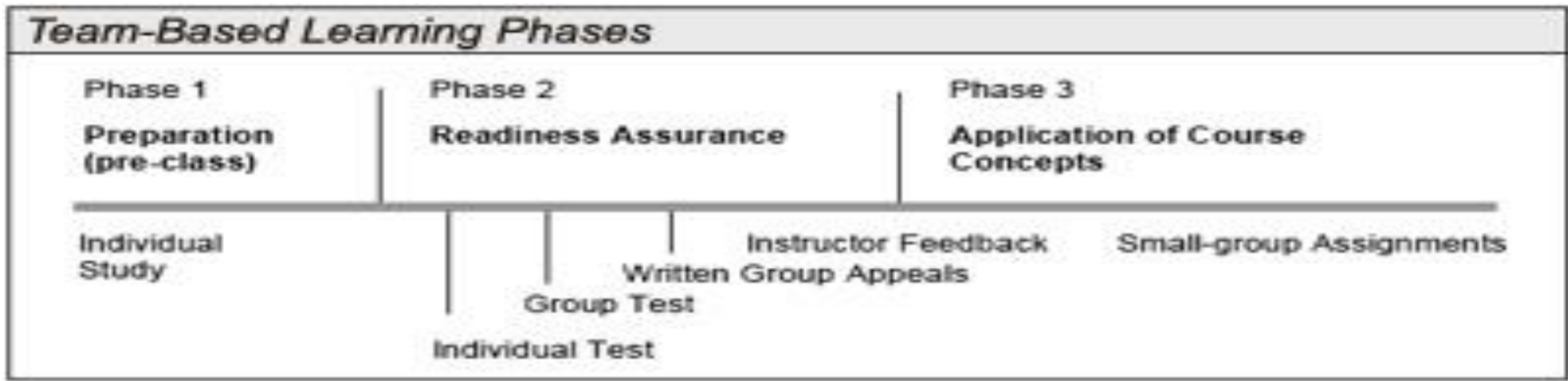
- Professional Practice and Leadership (PPL) is a required BSN course.
- Historically, HESI scores are below benchmark and learners ranked the course “average” in encouraging critical thinking skills, leadership and management skills, and overall course experience.
- In Spring 2014 semester, the primary teaching strategy in PPL was lecture with PowerPoint presentations.
- In Spring 2015 semester, Team-based learning (TBL) was implemented. TBL is an evidence-grounded instructional strategy that fosters team decision-making skills in complex problem-solving.

Objectives

- To compare academic performance, critical thinking skills, leadership and management skills, and overall course experience in Spring 2014 and Spring 2015 semesters.
- To evaluate accountability to learning, preference for lecture or TBL, and satisfaction with TBL for Spring 2015 semester.

Methodology

- Two groups ($N=217$) in Spring 2014 (lecture) and Spring 2015 (TBL) were compared on academic performance (HESI Management Exam scores), critical thinking, leadership and management skills, and overall course experience (online survey).
- Accountability to learning, preference for lecture or TBL, and learner satisfaction was measured only with the TBL class (online survey).
- Differences in scores were analyzed using an independent t -test.
- Accountability to learning, preference for lecture or TBL, and learner satisfaction were measured by summing the subscale and total scale of the TBL- Student Assessment Instrument.



Results

- TBL learners scored higher on the HESI and reported higher degrees of critical thinking and leadership and management skills; differences were not statistically significant
- TBL learners reported lower overall course ratings; difference was not statistically significant.
- TBL learners reported moderate to high levels of accountability, neutral levels of preference for lecture, and satisfaction, and total scores, indicating participants were slightly satisfied with TBL.

	Spring 2014 N=119	Spring 2015 N=98	Difference Between Groups
HESI	760 (153.77)	794 (124.67)	$p=.08$
End of Semester Course Evaluations			
Critical Thinking	$M=2.67$ (1.16)	$M=2.88$ (1.16)	$p=.47$
Leadership & Management	$M=2.5$ (1.21)	$M=2.92$ (1.04)	$p=.16$
Overall Course Ratings	$M=2.66$ (.91)	$M=2.83$ (1.01)	$p=.52$
TBL-Student Assessment Instrument			
Accountability	--	$M=30.97$ (4.84)	--
Preference	--	$M=49.75$ (9.37)	--
Learner Satisfaction	--	$M=30.08$ (8.84)	--
Total Score	--	$M=110.8$ (11.11)	--

Table 1: Results from HESI scores and TBL-SAI for Spring 2014 and Spring 2015.

	Spring 2014 N=119	Spring 2015 N=98
Age	$M = 28.1$ years (7.07)	$M = 26.9$ years (6.44)
Gender	Males = 19 Females = 86	Males = 11 Females = 87
Ethnicity	White = 50 Hispanic = 27 Black = 11 Asian = 15 Other = 2	White = 51 Hispanic = 8 Black = 21 Asian = 13 Other = 5
Missing Data	$n = 14$	$n = 0$

Table 2: Demographic information for learners in Spring 2014 and Spring 2015.



Conclusion

- TBL was equally effective as lecture in academic performance and in encouraging critical thinking and leadership and management skills.
- The study’s focus on learner outcomes contributes to the knowledge base related to TBL in nursing education and supports its continued use.
- Longitudinal analyses of learner outcomes are needed to determine if there are resilient benefits to TBL.
- To control for extraneous factors and limit confounding, future research should evaluate the impact of TBL utilizing a randomized control trial.