

A Comparison of Online and Televised Interactive Classroom Learning for Undergraduate Nursing Research Students

Presented by

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Purpose

- To compare online and televised interactive classroom (classroom) learning on:
 - Knowledge
 - Skill acquisition
 - Confidence
- To identify variables that may influence online and classroom learning.

Issues Related to Nursing

- The nursing research class is:
 - A core curriculum class
 - Required for all undergraduate students
- The ISU School of Nursing added online learning as an option for undergraduate students in the late 2000's.
- Limited information available in the literature comparing different modes of presentation.
 - Decisions about teaching not based on evidence
 - Positive opportunity to compare methods

Methods: Design and Sample

Design

- Comparative survey research study

Sample

- Convenience sample included:
 - Number of Enrolled Students = 154
 - Complete Data Set = 117
 - Group #1 = 59
 - Group #2 = 58
 - Undergraduate nursing students
 - Generic BS and RN-BS students
 - Class offered online & in classroom
 - Student choice



Methods: Data Collection

■ Pre test survey

- Demographic data
- Research knowledge & evidence based practice (EBP) questions

■ Post test survey

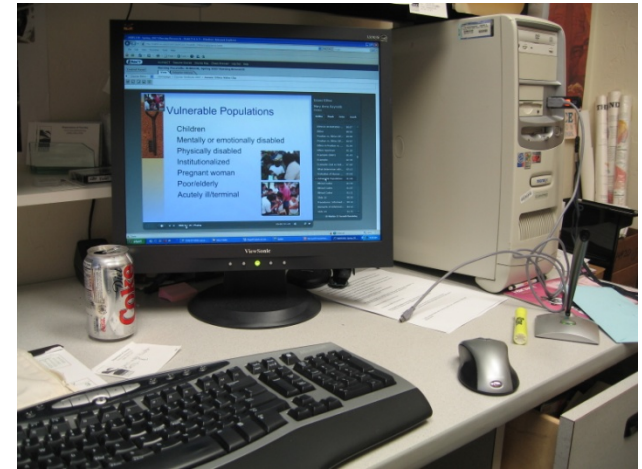
- Research knowledge & EBP questions
- Confidence in utilization of research & EBP
- Final grade
- Satisfaction

NURS 330: Nursing Research

- In both groups same:
 - Faculty
 - Course content
 - Course requirements
 - Grading criteria

- Online students
 - Presented via WEB CT & Moodle
 - Online discussion & presentation formats

- Classroom students
 - Weekly interactive classroom setting
 - Classes taught
 - Pocatello, Idaho Falls, Twin Falls



Pre-test Questions

- Research Process (7)
- EBP (3)
 - Nursing research
 - Sampling
 - Research problem
 - Hypothesis
 - Use of library resources
 - PICO question
 - Construct
 - Discomfort and harm
 - Descriptive study
 - Reliability/validity
- Demographics:
 - Age
 - Gender
 - GPA
- Online vs Class
- Generic vs RN-BS
- Urban vs Rural
- Previous experiences with online courses
- Prefer online vs classroom
- Convenience
 - Timing of class
 - Travel time
 - Scheduling
- Importance of nursing research

Post-test Questions

■ Definitions:

- Nursing research
- Sampling
- Research problem
- Hypothesis
- Use of library resources
- PICO question
- Construct
- Discomfort and harm
- Descriptive study
- Reliability/validity

■ Class Final Grade

■ Course Satisfaction

- (class #2 only)

■ Additional Questions:

- Trust ability to use research in clinical setting
- Trust ability to use EBP in clinical setting
- Understand basic steps of research process
- Understand basic principles of EBP
- Able to read research reports
- Will continue to read research article in nursing
- Plan to utilize EBP in clinical practice

Demographics (N=117)

■ Total Sample

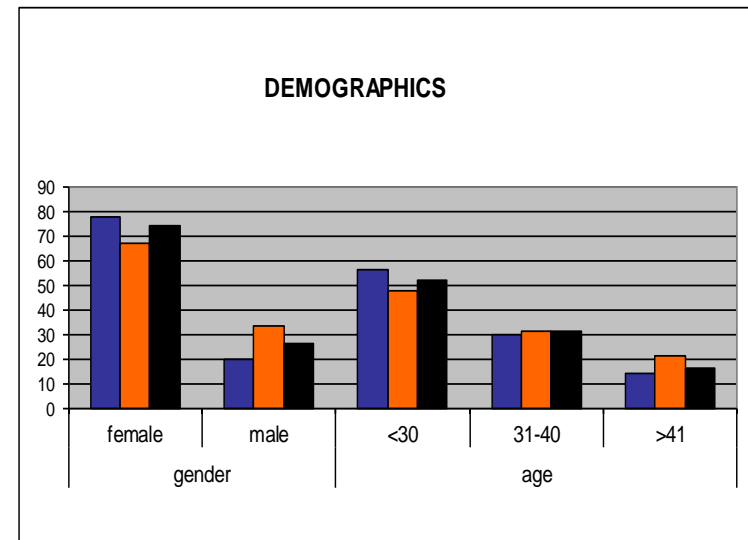
- Class #1 n = 59
- Class #2 n = 58

■ Gender

- Females 74% (86)
- Males 26% (31)

■ Age

- <30 52% (61)
- 31-40 31% (36)
- >41 17% (20)



Demographics (N=117)

■ Class Type

- Online 61% (72)
- Classroom 39% (45)

■ Type of Student

- Generic 68% (79)
- RN-BS 32% (38)

■ Urban

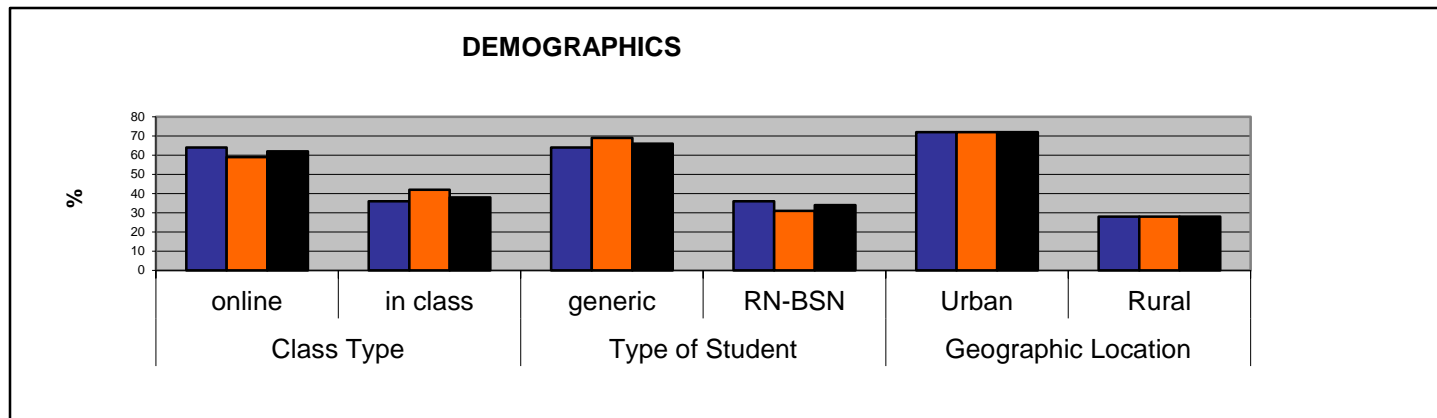
72%

- Pocatello (51)
- Idaho Falls (27)

■ Rural

28%

- North: Rexburg (3)
- South: Malad (5)
- East: Twin Falls (11)
- Central: Blackfoot (11)



Learning Environment (N=117)

Taken Online Classes

- Yes 80%

Liked Online Classes

- Yes 88%

Preference (group #2)

- Online 41%
- Classroom 59%

Did you Select what you Prefer (group #2) ?

- Yes 72%

Preference (group #1)

- Online 10%
- Classroom 27%
- Convenience 63%

Convenience

- Time of Class 19%
- Travel Time 18%
- Schedule/Family 30%
- Schedule/Work 33%



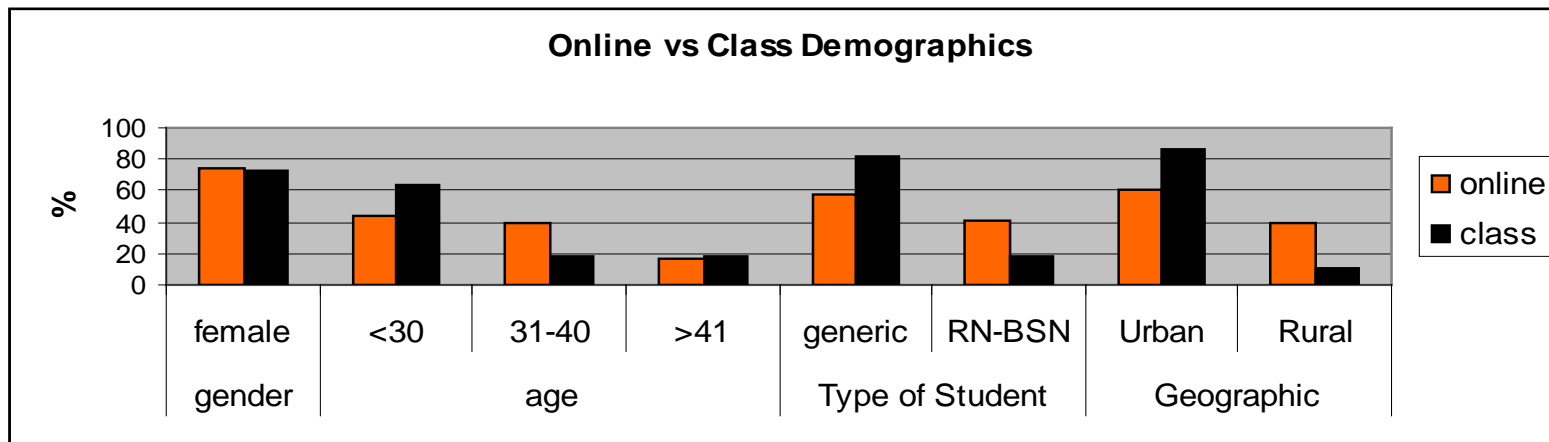
Course Outcomes (N=117)



		Group #1	Group #2
Pre Test Scores	6-10 points	12%	15%
Post Test Scores	6-10 points	93%	93%
Confidence in Using Research	Strongly Agree	39%	36%
	Agree	56%	60%
Confidence in Using EBP	Strongly Agree	49%	51%
	Agree	52%	48%
Final Grades	A	41%	52%
	B	54%	43%
	C	3%	5%
Satisfaction	More Satisfied		76%
	Dissatisfied		24%

Online vs Class Demographics

	OL	Class		OL	Class
Gender			Generic vs RN-BS		
■ Female	74%	73%	■ Generic	58%	82%
			■ RN-BS	41%	18%
Age			Urban vs. Rural		
■ < 30	44%	64%	■ Urban	61%	87%
■ 31-40	39%	18%	■ Rural	39%	11%
■ > 41	17%	18%			



Online vs Class Learning Environment

	Online	Class
Taken Online Classes		
■ Yes	85%	73%
Liked Online Classes		
■ Yes	97%	61%
Preference		
■ Online	14%	0%
■ Class	0%	69%
■ Convenience	86%	27%
Prefer (group #2)		
■ Online	62%	13%
■ Classroom	38%	88%



Reasons for Selecting Class (n=78)

Convenience	Online (n=68)	Class (n=10)
Time of Class	21%	10%
Travel Time	16%	30%
Schedule ■ Family/Personal	31%	20%
Schedule ■ Work	32%	40%



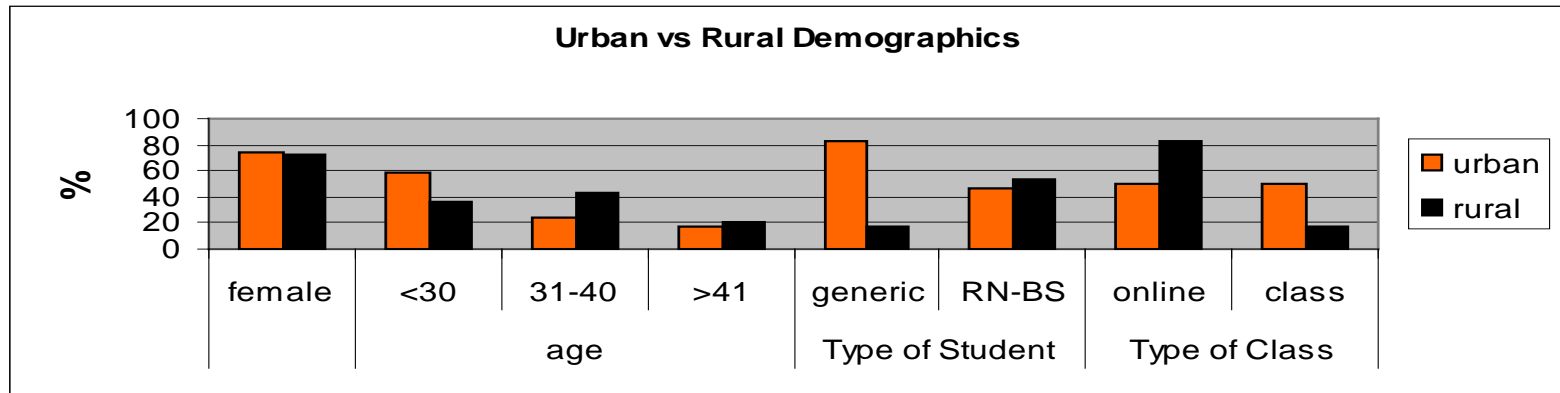
Online vs Class Outcomes



		Online	Class
Pre Test Scores	6-10 points	14%	13 %
Post Test Scores	6-10 points	90 %	98%
Confidence in Using Research	Strongly Agree	35%	42%
	Agree	61%	53%
Confidence in Using EBP	Strongly Agree	47 %	47%
	Agree	51%	51%
Final Grades	A	43%	51%
	B	51%	45%
	C	6%	4%
Satisfaction (2007)	More Satisfied	74%	76%
	Dissatisfied	26%	21%
Online Students <ul style="list-style-type: none"> • 2 attended the class 	Class Students <ul style="list-style-type: none"> • 2 never attended class • 10 attended less than 50% of the time 		

Urban vs Rural Demographics

	Urban	Rural		Urban	Rural
Gender			Generic vs RN-BS		
■ Female	74%	73%	■ Generic	83%	17%
			■ RN-BS	47%	53%
Age			Online vs Class		
■ < 30	58%	37%	■ Online	50%	83%
■ 31-40	25%	43%	■ Class	50%	17%
■ > 41	17%	20%			



Urban vs Rural Learning Environment

	Urban	Rural
Taken Online Classes		
■ Yes	78%	83%
Liked Online Classes		
■ Yes	75%	96%
Preference		
■ Online	8%	10%
■ Class	34%	13%
■ Convenience	58%	77%



Reasons for Selecting Class (N=70)

Convenience	Urban (n = 45)	Rural (n = 25)
Time of Class	24%	12%
Travel Time	4%	44%
Schedule <ul style="list-style-type: none"> ■ Family/Personal 	38%	16%
Schedule <ul style="list-style-type: none"> ■ Work 	33%	28%



Urban vs Rural Outcomes



		Urban	Rural
Pre Test Scores	6-10 points	10%	20%
Post Test Scores	6-10 points	95%	89%
Confidence in Using Research	Strongly Agree	42%	30%
	Agree	54%	63%
Confidence in Using EBP	Strongly Agree	49%	40%
	Agree	50%	57%
Final Grades	A	48%	43%
	B	46%	54%
	C	6%	3%
Satisfaction (2007)	More Satisfied	74%	80%
	Dissatisfied	25%	20%

Findings

- Compare online versus class learning on knowledge, skill, and confidence.
 - No difference
 - Data suggests
 - Important to have different methods of instruction that meet the needs:
 - Preferred way of learning
 - Convenience



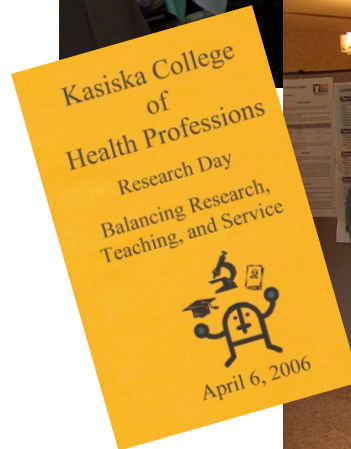
Other Findings

- Variables that may influence online and classroom selection and overall student success
 - Age range of students
 - Previous online experience
 - Preference/Convenience
 - Diversity of student population
 - Opportunity to select learning environment
 - Rural versus urban environments
 - Generic versus RN-BS



Findings for Education Learning Activities

- Most Helpful
 - EBP Project
 - 53%
 - Study Guides
 - 27%
 - Critique
 - 8%
 - Research Activity
 - 11%
 - Exams
 - 1%



Student Comments: Group #1

- "Instructors did a good job of making a class I would never take voluntarily, bearable, especially on a Friday afternoon."
- "I understand why it is necessary to understand EBP, I also know research is not for me."
- "Doing a group project online is ridiculous. I put the PowerPoint together, I did the reference page, and I completed the research."
- "It was my first online class and I discovered that online classes are just not for me. I need to be present."



Student Comments: Group #2

- At the beginning of the semester I registered for the distance learning class as I had a bad experience with on online class before. After a couple of weeks in class, I found that I did as well or better listening to lecture at home."
- "The main reason I did not attend class was that I could watch the session on my computer in less time than going to class and not have to take my child somewhere else."
- "I was signed up for the online class but actually went to class starting the third week...I thought it was more helpful."
- "I only wish more classes were offered online."
- "I would have liked to have had more interaction with the other online students."
- "Wish I would have actually met the instructors."



Implications for Education

- Both methods of learning have value and are effective.
- Decisions need to be made based on:
 - Student preference
 - Faculty preference
 - Available resources
 - Cost
- Decisions can not be made based on pre-conceived ideas about the “traditional” or “nontraditional” students.



Implications for Further Research

- Student satisfaction
- Student diversity
 - Generic
 - RN-BS
 - Boise Fast Track
 - AD-MS
- Faculty satisfaction
- Course outcomes
 - Other/additional evaluation criteria for both the course and faculty evaluations.
- Continued assessment of online learning environments and working to meet the needs of all students.



Questions?

