Teaching Undergraduate Research in an Online Environment

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Goals and Learning Outcomes

Session Goal:

- **To describe the transformation of research knowledge into practice** by addressing the challenges and opportunities of teaching research methods to online RN BSN students.

Session Learning Outcomes:

At the end of this session, participants will be able to:

- **Describe the teaching methods used in the online environment** in transforming research methods content to practice.
- **Identify creative solutions to common problems** associated with online learning and course content.
Overview of RN BSN Program

- Clarion University of PA: rural, western PA
- ASN, **RN BSN (online)**, BSN, MSN (online), DNP (online)
- ~ 165 total RN BSN students
- 33 upper division nursing credits; 120 total credits
- Curriculum redesigned 2013
- Nurs 445 Research in Nursing → Nurs 494 Capstone course
- Senior level students; Class size ~ 20 - 30 students / section; 3 sections
Clarion University of Pennsylvania’s RN-Bachelor of Science in Nursing Program prepares the graduate to:

1. Integrate scholarly inquiry, research, and theory into evidence-based nursing practice;

2. Promote health and well-being for individuals, families, and communities including vulnerable and diverse populations;

3. Provide leadership to initiate change within communities, the profession of nursing, and the healthcare delivery system;

4. Apply clinical thinking skills to professional nursing practice;

5. Communicate effectively with others in a variety of settings;

6. Demonstrate professionalism in nursing practice.
Student Demographics: An important consideration

- 87% Females; 13% Males
- > 52% age 35 – 54
- > 70 % Married
- > 50 % 1 – 4 Children under age 17
- > 90 % Employed FT; 1% Unemployed; 70 % working rural or urban hospital
- ~ 80% living in western PA
- ~ 50% taking 6 credits / semester
Course Description

NURS 445: Research in Nursing (3 credit hours)

- Emphasizes the role of research in developing EBP
- Explores the principles of systematic method of inquiry
- Enhances clinical thinking, group process, and decision-making skills.
- Focuses on the ways research influences practice
- Provides opportunity to critique current research for applicability to practice
- Studies are carried out the next semester in the capstone course
Graded Assignments

- Weekly Discussion Board focusing on the research process (Group)
- Two required conference calls/semester (Individual)
- Developing research proposal based on NINR Strategic plan (Group)
- Quantitative Analysis (Individual)
- Qualitative Analysis (Individual)
- Article Summary (Individual) → Review of the Literature (Group)
- IRB Submission (Group)
Weekly Group Discussions
(Week #2 – #13)

- Selection of topic from NINR Strategic Plan & defining the problem
- Research Question
- Review of the literature
- Design
- Hypothesis, variables, definition of terms
- Ethical considerations & IRB
- Theoretical frameworks
- Sample: inclusion & exclusion criteria, sampling plan, recruitment
- Data collection instrument(s) & plan
- Analysis plan: qualitative and quantitative
- Interpreting findings
- Research appraisal and critiques
Challenges

- Inherent “fear” of research
- Misconception of what is and what isn’t research
- Forming Groups: random selection versus specific criteria
- Governing Group Work
- Forming groups for studies: skills? Work environment? Topic interests?
- How to assess skills of group members
- Making course work manageable
- Large class size; large group size
- Limitations of what research students may or may not perform
- IRB process
- 15-week semester versus 7 ½ week term
Solutions

- Increase opportunities for hands-on undergraduate research experience
- Experimenting with group formation: assessing skills of group members
- Group Charter – empowering groups through self-governing
- Required conference calls
- Moving IRB approval process to Nurs 445
- Limit studies to descriptive qualitative or quantitative designs
- Samples for quantitative studies: students enrolled in nursing programs
- Limiting class size: 20 students per section; 5 students/group
What is the knowledge level and the attitudes of emergency field workers administering Naloxone for opioid overdose patients? (Mixed methods)

What knowledge deficits among nurses contribute to inadequate pain management? Descriptive Quantitative

How do nurses describe their ability to communicate with terminally patients and families? Grounded Theory

What factors contribute to compassion fatigue among registered nurses? (Descriptive Quantitative)

What motivates registered nurses over 40 years of age to go back to school for a baccalaureate degree? (Phenomenological Qualitative)
What Students Are Saying

- Availability of instructor a must
- Conference calls provide connection between instructor & students
- Build a Study a great way to develop a research study
- Instructional methods unique & creative
- Written lectures, power points & videos enhanced learning
- Very challenging course; subject a little scary but now excited about research
- Group presentation of study made us sound like “real researchers”
- Instructor set high expectations for students and helped us rise to those expectations
- Very positive experience which came as a surprise; dreaded this at the beginning of the semester
Future Considerations

- Scheduling: 15 weeks versus 7 ½ weeks
- Class size
- Faculty workload / faculty mentoring
- Adjunct faculty
- Writing skills of students in an accelerated program