

**Title:**

Building Scholarship: Graduate Nursing Research Skills Strengthened by Technology

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**Session Title:**

Technology-Based Innovations in Graduate Nursing Education

**Slot:**

G 11: Monday, 30 October 2017: 1:15 PM-2:30 PM

**Scheduled Time:**

1:35 PM

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**Keywords:**

graduate nursing technology, nursing education technology and technology nursing research

**References:**

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**Abstract Summary:**

Graduate nursing research content includes advanced skills of synthesis and application of evidence to clinical practice. Technology, integrated into pedagogy and research content, can promote increased student comfort, engagement, comprehension, and presentation skills to enhance achievement of course outcomes and strengthen skills for future participation in research.

**Learning Activity:**

LEARNING OBJECTIVES	EXPANDED CONTENT OUTLINE
Identify how technology tools promote mastery of advanced research content in statistics and research methodologies.	Explain how instructional videos, synchronous and asynchronous study sessions and presentations, and two cloud-based tools are effective in enhancing the understanding and application of advanced research content.
Utilize cloud-based tools to provide interactive platforms for building and presenting graduate student research assignments.	Describe how cloud-based technology tools are integrated into course assignments in statistics, qualitative presentations and field work, and the plan, design, and presentation of a research proposal in graduate nursing research courses.

**Abstract Text:**

**Background:** Nursing programs are expected to produce graduates that can contribute to evidence-based care, quality improvement, and informed decision-making in professional practice, thus the study of research concepts is an essential component at all levels of nursing education (AACN, 2016; Balakas & Smith, 2016). In the undergraduate level the outcomes include understanding the research process and research reports, identifying clinical concerns, and appraisal and synthesis of evidence (Balakas & Smith, 2016; Tsai, Cheng, Chang, & Liou, 2014). Expectations at the master's level include advanced skills of more in-depth and rigorous appraisal, understanding research methodologies, analysis, and critique, and translating evidence into practice policies, as preparation for future participation in and conduction of research studies (Balakas & Smith, 2016). The challenge for educators lies in the perception that research content is dry, complex, and confusing, particularly with

concepts related to study design, analysis of data, and the conduction of studies (Hamilton, 2010). Evidence demonstrates that students' understanding and comfort with research content increases when guided by innovative teaching-learning methods (Birks, 2011; Hamilton, 2010). Successful strategies that have increased students' understanding and engagement in learning research and related clinical nursing content in undergraduate courses include simulated studies (Birks, 2011), gaming (Aljezawi & Albashtawy, 2015; Levya-Moral & Camps, 2016; Phillips, 2014; Tsai et al., 2014), and clinical application (Birks, 2011). There is little noted on the impact of integrating educational technology to promote achieving student outcomes in online graduate programs.

In an online master's nursing curriculum, advanced nursing research content includes biostatistics, quantitative and qualitative methodologies, research ethics, qualitative fieldwork, and design and presentation of a clinical research proposal. Educational technology is fully integrated throughout the graduate program, and is utilized in a variety of ways in the research courses. Learning strategies that apply technology include aggregated and scaffolded SPSS exercises on individual topics, instructional videos, and varied student-led applications of several cloud-based multimedia tools for assignments, presentations, and interactive discussions of research concepts. The comprehensive assignment in advanced research methods is the design, creation, and presentation of a research proposal. Students choose a clinical topic, and then develop major components of a proposal that could be presented to an institutional review board. Individual guidance is provided via instructor-led, synchronous study sessions and asynchronous interactive forums where students' evolving proposals are reviewed by faculty and peers in various stages of development. Faculty and peer feedback are provided throughout proposal development, using technology tools to increase and enhance interaction. Each student creates their own individual proposal, so that all parts of proposal development are mastered. Individual proposals circumvents the challenges of scheduling conflicts for group meetings and potential workload inequity during extended and complex group projects (Hamilton, 2010; Oermann & Gaberson, 2014). Completed proposals are presented college-wide in a synchronous forum, using a cloud-based video conference system. This approach simulates a research conference and provides the opportunity to practice and refine presentation skills, which assist both in professional roles and as preparation for future doctoral education. Student evaluations are significant for increased comfort and confidence with research content, and their ability to create and present a proposal. They express pride in their accomplishments and feel more at ease with advanced research and evidence-based practice. These pedagogical approaches can be applied to undergraduate courses, appropriate to the activities in class.

**Purpose:** This presentation will describe several technology tools and approaches used in teaching research in an online graduate nursing program. Integrating technology has been effective in increasing student interest, comfort, comprehension, and application of research concepts at an advanced level, and has served to promote greater communication, interactivity and engagement in the online learning process.