Longitudinal Evaluation of Evidence-Based Practice Competency Development in Nursing Students

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MACMLA Research & Assessment Grant

For Sections 1-4 please see Appendix A: Authors Curriculum Vitae

**Section 1: Applicant Information**

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James Madison University - Carrier Library  
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Phone: 540-568-4264  
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BSN Program Coordinator  
School of Nursing  
James Madison University  
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Harrisonburg, VA 22807  
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**Section 2: Education**

Please see Appendix A: Authors Curriculum Vitae

**Section 3: Experience**

Please see Appendix A: Authors Curriculum Vitae

**Section 4: Other Accomplishments**

Please see Appendix A: Authors Curriculum Vitae

**Section 5: Project Design**

1. **Rationale & Assessment of Needs**

Evidence-based practice (EBP) (also known as evidence-based medicine) emerged as a new standard of practice in health care over two decades ago (Evidence-Based Medicine Working Group, 1992). The role of nurses in EBP activities continues to evolve and solidify into more specific tasks and skills (Melnyk, Gallagher-Ford, Long, & Fineout-Overholt, 2014). To clarify the expectations of EBP competencies, Melnyk et al. (2014) drafted and validated thirteen competencies for registered professional nurses (RNs). These
Competencies encompass skills such as gathering internal evidence about patients, formulating focused research questions, finding and evaluating external information resources, applying internal and external evidence to decision-making, and assessing outcomes (see Appendix B for the full list of competencies). Early stages of this process, such as research question formulation and evaluation of information resources, closely connect to the information literacy skills developed in higher education, encouraging a strong partnership with librarians (ACRL Health Sciences Interest Group, 2013; Adams, 2012). Given the recency of these competencies, research is necessary to ascertain whether or not nursing students preparing to become registered nurses meet these expectations and any issues that might inhibit competency (Melnyk & Gallagher-Ford, 2015).

Nursing education is a widespread method to train new nurses and update the skills of existing nurses. EBP is an essential component of current nursing education and practice (American Association of Colleges of Nursing, 2008; Cronenwett et al., 2007; Greiner, Knebel, & Committee on the Health Professions Education Summit, 2003; TIGER Initiative, n.d.). However, Benner, Sutphen, Leonard, & Day (2010) observed that “nursing education is sharply divided by location” and that students “need more connections between what is taught in the classroom and their clinical experiences” (p. 63-65). With most information literacy instruction traditionally taking place in the classroom environment, students struggle to translate these skills to everyday practice. As nursing students transition into traditional practice, “graduates continue to leave their educational experience with negative attitudes toward research along with perceptions that EBP takes too much time and cannot be realistically implemented in real-world clinical practice settings” (Melnyk et al., 2012, p. 415). Therefore, nursing educators and librarians need to better align research practices with clinical work environments and practices during nursing education.

Health care organization certification and nursing education have attempted to promote EBP as a more consistent standard of care. Recognizing the strong influence of the health care environment on quality of care, the American Nurses Credentialing Center (ANCC) established the Magnet Recognition Program to reward work environments that were more supportive to EBP processes (ANCC Magnet Recognition Program, 2015; ANCC Pathway to Excellence, 2015). The Magnet Recognition Program started in the mid-1990s and has grown worldwide to 419 hospital facilities. The Magnet Model identifies hospital strengths across five categories: transformational leadership; structural empowerment; exemplary professional practice; new knowledge, innovations and improvements; and empirical outcomes. In particular, Magnet institutions in the United States possess a better organizational culture for EBP, including regular education, recognition programs, and consistent implementation (Karkos & Peters, 2006; Melnyk, Fineout-Overholt, Gallagher-Ford, & Kaplan, 2012; Wilson et al., 2015). Unfortunately, as of 2011, only 6.61% of hospitals have achieved ANCC Magnet
Recognition, indicating that Magnet status alone will not transform barriers to EBP in most settings.

To better understand the challenges of the majority of real world clinical settings, existing literature regarding obstacles to EBP over the last few decades can guide educational strategies. The BARRIERS scale, one of the most common instruments used to investigate this issue, contains four categories of barriers to evidence-based practice (Funk, Champagne, Wiese, & Tornquist, 1991). The categories include the nurse’s research values, skills and awareness; setting barriers and limitations; qualities of the research; and presentation and accessibility of the research. Kajermo et al. (2010) systematically reviewed over 63 studies using the BARRIERS scale and aggregated information to identify persistent barriers. Fifty-three studies ranked the issues based on response frequency. From those rankings, the Setting Barriers and Limitations category is the biggest barrier to EBP followed by Presentation and Accessibility of the Research. The study determined that these barriers remained consistent over the last few decades. Since the publication of the BARRIERS systematic review, other nursing researchers developed more targeted instruments to further evaluate the settings barriers to EBP (Pryse, McDaniel, & Schafer, 2014). The EBP Work Environment Scale (EBPWES) provides greater insight into nurses’ perceptions about their ability to engage in EBP. This validated measure gauges a few different variables related to work environment, including full-text article access, organizational culture, and application to practice support. Therefore, this instrument can help gauge the perception of work environment barriers in local contexts. In regards to Presentation and Accessibility of Research, mobile technology, point-of-care apps, and electronic health records are changing the delivery and presentation of information. Students using PDAs in the delivery of patient care have greater confidence, improved time management, greater quality of care, and improved patient outcomes (Johansson, Pettersson, & Nilsson, 2013). However, the literature also highlights a variety of clinical setting concerns for professional use of iPads, such as infection control, perception of distraction, and security protections, such as HIPAA, that nursing programs must address (Choudhri, Chatterjee, Javan, Radvany, & Shih, 2015; Alexander, Nerminathan, Harrison, Phelps, & Scott, 2015; Sergeeva, Aij, van der Hoof, & Huysman, 2015; Howell et al. 2014). A primary limitation of the literature is a lack of effective strategies and lessons learned with integration of tablets into a nursing curriculum and clinical practice. Therefore, a researcher developed survey and interview questions will explore the issue of Presentation and Accessibility of the Research through the iPad platform in these settings. Given the continued issues with the ability of nurses to adopt and sustain EBP, as well as the disconnect between academic and practice-based methods, this study will take a sequential, mixed-methods approach to explore the learning experience of undergraduate nursing students. The EBP Work Environment Scale will gauge student perceptions of settings barriers and limitations. In the JMU program, all students are required to have an iPad for classroom and clinical use. Therefore, all students have a consistent computing hardware
expectation, but differences in information presentation through mobile apps or browsers, as well as accessibility will be other dependent variables to explore.

The researchers used this model for an initial study of two cohorts of second semester students midway through their program and across three different clinical courses. Based on the EBPWES across the three clinical courses, a majority of students had positive experiences with EBP in the work environment. However, only 63% agreed that they had access to databases with full length research and that nurses at their clinical site discuss relevant research. Themes identified in the interviews found that students had difficulties distinguishing between evidence based practice and research, had limited expectations for conducting EBP beyond acquisition of internal evidence, and most student research involved background questions, not foreground questions. The proposed study will revisit these same cohorts of students in their final semester in the program, allowing for a longitudinal comparison of responses over time.

**Research questions to be answered**

- How do clinical work environments influence nursing students’ understanding and application of evidence-based practice over time?
- How do mobile devices influence the development of nursing students’ ability to conduct evidence-based practice over time?
- How do mobile devices influence the development of nursing students’ ability to use information technology over time?

**2. Methodology & Timeline**

In Fall 2016, the researchers will invite fourth semester nursing faculty to pilot the survey and interview questions, allowing for appropriate modifications of the previous study’s research instruments (see Appendix C for draft research instruments based upon previous study). During the fourth semester, students complete two clinical rotations in NSG 454L Transition to Practice Clinical and NSG 456 Capstone as 8-week block courses. Students complete each course will switch after the initial eight weeks to then complete the second course in the remaining eight weeks of the semester. Therefore, to ensure students have experience in both clinical courses, the researchers will recruit participants starting in the last five weeks of each semester. To mirror the previous study, the researchers will run the study both in Fall 2016 and Spring 2017 for two cohorts. Students in each cohort (n=90 in Fall 2016 and 90 in Spring 2017) receive an invitation to complete a survey with basic demographic information, the EBP Work Environment Scale for each of their clinical courses, and a list of information resources used at each location. Based on the responses, students receive a follow up request for a one-hour interview to discuss why and how they use the information resources, how do they define EBP, how they assess their skills in relation to the Melynk et al.’s (2014) EBP competencies, and how the work environment influences their understanding and participation in EBP. 12-15 students from each cohort will complete interviews, as Hagaman and Wutich (2016) found that 20-40 interviews are necessary to saturate themes in multisited
research; students in Capstone course are located at multiple different hospitals, so the multisited model is the most appropriate for determining interview guideline needs. We will continue to use this method of data collection due to the high response received in the previous study and to allow for comparisons across studies. The longitudinal perspective will allow me to track changes in the same students and determine changes before and after the third semester research-based course, as well as additional year of clinical experience.

Sept-Oct. 2016 Pilot survey and interview questions with nursing faculty; revise survey with fourth-semester clinical rotation details
Nov.-Dec. 2016 Distribute survey; compare longitudinal response of survey participants to prior data; recruit interview participants; conduct cohort one interviews
Jan.-March 2017 Conduct cohort one interview transcription and data analysis
March-April 2017 Distribute survey to cohort two; compare longitudinal response of survey participants to prior data; recruit interview participants; conduct cohort two interviews
April-Dec 2017 Transcribe all interviews, complete data analysis, publish/present findings

3. Budget

$150 is requested for incentives for survey participants. For each cohort, survey participants who provide their contact information will be eligible to enter a raffle for one of three $25 gift cards per cohort. Therefore, 6 gift cards will be needed in total.

$750 is requested for incentives for interview participants. This figure is based on recommended rates for health care professionals; Dykema, Stevenson, Day, Sellers, and Bonham (2011) found that high cost incentives ($50-$100) are necessary to effectively recruit physician participants. Since the participants are not quite at the same level as those in the Dykema et al study, the researchers would have the incentive rate to be $25/interviewee. The current study originally planned to have 12 interviews for each cohort but has met only half of that goal due to lack of incentives.

$1,100 is requested for interview transcription. On average, interviews last around 45 minutes and transcription costs are around $1/minute. Therefore, with 24-30 interviews, we anticipate needing to transcribe at least 1,080-1,350 minutes of recorded interviews.

4. Letter of Support from Library Director
The James Madison University Libraries and Educational Technologies (JMU LET) are pleased to support this ongoing research project by Carolyn Schubert and partners. The initial study was supported through a research leave, taken in two pieces in the summers of 2015 and 2016, and through ongoing protected time as
part of her expectations as a tenure-track faculty member in LET. In addition, LET supports Ms. Schubert’s professional development in direct relation to this project, including attendance at the Institute for Research Design in Libraries in the summer of 2015.

K.T.L. Vaughan, MSLS, AHIP
Acting Associate Dean
Director of Research & Education Services
James Madison University Libraries & Educational Technologies


5. Appendices

Appendix A – Authors Curriculum Vitae

Carolyn Schubert, MLIS

Education
MLIS  Library & Information Science, San Jose State University, 2009
BA  Comparative Literature, University of California, Irvine, 2006
    Cum Laude
    Phi Beta Kappa

Professional Experience
James Madison University  2011-Present
Health Sciences & Nursing Librarian

- Provide in-person, hybrid, and online asynchronous instruction, fostering information literacy skill development in undergraduates, graduate and professional students, and faculty
- Manage collection development for allied health sciences programs, as part of the Applied Health Sciences cluster
- Provide in-person, virtual, and asynchronous reference support
- Collaborate with other units, such as the Center for Instructional Technology and Center for Faculty Innovation, to address faculty professional development needs, such as teaching with emerging technologies for distance and online learning
- Contribute research support services segments for the Health Services Administration and Occupational Therapy accreditation reports
- Design and restructure support to the Health Sciences department and across allied health programs for more sustainable support
- Collaborate with Health Studies faculty to develop and revise a Health Studies Information Literacy Test

California State University, East Bay  2010-2011
Adjunct Instructor

- Teach 2 sections of the Introduction to Information Literacy hybrid online to help students meet the College’s information literacy graduation requirement
- Collaborate with fellow instructors on the development and effectiveness of learning tools and techniques
• Develop course curriculum to address the ACRL Information Literacy standards

Contra Costa College
Reference & Instruction Librarian, Instructor
2009-2011
• Teach the Library Studies 110A online course to help students meet the College’s information literacy graduation requirement
• Provide reference assistance to students, faculty, and staff both in-person and over the phone
• Evaluate student performance in the Library Studies 110A along with other course instructors to improve course assignments, online course content, and student success
• Mentor and support the training of new adjunct librarian faculty to teach other sections of the Library Studies 110A course
• Teach single-session library orientation sessions for courses in Biology and English, as well as develop campus-wide training sessions on new teaching technologies as part of the Jumpstart Your Online Research series
• Assist in data compilation as part of the student learning outcome evaluation

Exploratorium Learning Commons
Library Intern
March-May 2008
• Review, evaluate, and update operating policies for new staff training
• Collaborate with staff and present a session about the use and availability of electronic databases for the research and exhibit development departments

Berkeley Research Company
Librarian & Office Manager
2006-2011
• Administer the creation and continued operation of a corporation, including tracking of periodic changes in state and federal taxation and business law, as well as human resources policies
• Manage and assess company performance with various evaluative metrics, including goal creation, project management, and accounting report tracking
• Research codes, standards, and other technical and academic literature for professional engineers through various interlibrary loan methods, as part of the forensic mechanical, electrical, and materials science research in the job
• Digitize and perform optical character recognition for case materials, including photographs and documents

Università di Bologna, Leonardo Possati Library
Library Intern
January-May 2006
• Basic cataloging of monograph materials in the Cardiac and Transplant Surgical Library at the University of Bologna’s Sant’Orsola Hospital
• Survey previously unregistered archival materials about the history of surgical practice
• Collaborate with the head librarian to translate from Italian to English documents describing the library’s collection of books, journals, and antique surgical tools

University of California, Irvine, Langson & Science Libraries
Library Student Assistant
• Format a wide range of site guides and bibliographies under the direction of subject librarians for the Engineering, Statistics, and Psychology and Social Behavior departments
• Review vendor & publisher-based domestic and international approval plans, as well as review publisher catalogs, system-wide holdings, and collection development policies to address the collection needs of the Humanities and Physical Sciences departments to determine possible new acquisitions
• Format and plot statistics tracking department expenditure for monthly review

Teaching Experience
Introduction to Informatics for Health Care Professionals (IPE 391)
James Madison University
The course is taught annually during the Spring semester. My role in these courses included the development of a new course to address recent changes in health informatics, such as the HITECH Act and Affordable Care Act. Other topics covered include relational databases as electronic health records (EHRs), telemedicine, and mobile health technologies. The courses are taught as a flipped class experience.

Introduction to Information Literacy (LIBY 1210)
California State University, East Bay
The course was taught every quarter during the 2010-2011 academic year. My role in these courses included the development of course curriculum to prepare freshmen students with the information literacy skills necessary for undergraduate education. Topics included information retrieval, resource evaluation, and the ethical use of information. Different sections of the course emphasized different subject clusters, such as Energy and Living Things, based on pre-selected majors. The first version of the course was taught as a hybrid course, but the other two quarters were taught as online courses.

Library & Information Research Skills (LIBST 110A)
Contra Costa College
My role in this course included the standardized teaching of information literacy based on shared modules across other LIBST courses. The course focused on traditional information literacy skills such as information retrieval and resource evaluation. However, some contents were tailored to the population, such as lifelong information literacy. Later iterations of the course allowed for developing new modules, such as privacy in the information age module. The courses were taught multiple times, sometimes multiple sections in the same semester. The courses were hybrid courses.

Honors & Awards

ACRL Early Career Librarian scholarship (2015)
IGI Global Academic Librarian Sponsorship for the Charleston Conference (2014)
MAC Award for Professional Excellence by a New Health Sciences Librarian at the Mid-Atlantic Chapter of the Medical Library Association Annual Meeting (2014)
Best in Track award for Student Support presentation at 10th Annual Sloan Consortium Blended Learning Conference and Workshop (2013)
National Library of Medicine Biomedical Informatics fellowship (2013)
National Medical Librarians Month Share Your Success award (2012)

Publications


**Paper Presentations**


Schubert, C. (2013, 7 May). *The visually literate Health Sciences Librarian and Instructor: Effective sharing and teaching with multimedia.* Presentation completed at One Health: Information in an Interdependent World, the 2013 joint conference of the Medical Library Association, International...


Giles, K., Schubert, C., & Wilson, N. (2012, 9 May). *The art of plagiarism: Identifying it, understanding it, and using resources and activities to bridge the critical thinking gap*. Presentation completed as part of James Madison University’s Center for Faculty Innovation May Symposium, Harrisonburg, VA.

Schubert, C. (2012, 5 April). *Using the gifts the university & the Internet gave me to teach critical thinking and relevant workplace skills in information literacy courses*. Blackboard Collaborate webinar presentation completed as part of California Academic and Research Libraries conference.


**Poster Presentations**


MACMLA Research & Assessment Grant


Grants

**Funding Agency:** School of Nursing, James Madison University  
**Title of Grant:** BSN diversity simulation project, semester 4: improved cultural sensitivity and awareness in the BSN curriculum  
**Investigators:** Linda Sobel, Erica Lewis, Lisa Carmines, & Carolyn Schubert  
**Grant Amount:** $4,071  
**Grant Status:** Funded

Professional Activities

**National**  
Medical Library Association  
Rittenhouse Award Jury member (2013-2014)  
Nursing and Allied Health Resources Section (NAHRS) Treasurer (2014-2017)  
Estelle Brodman Award for the Academic Medical Librarian of the Year Jury member (2015-2016)  
Scholarly Communications Committee member (2016-2019)

**State-wide**  
VIVA, The Virtual Library of Virginia  
Request for Proposal – Nursing and Social Sciences Resources committee member (2014-2015)  
Request for Proposal – Ebooks committee member (2016)

**Regional**  
Mid-Atlantic Chapter of the Medical Library Association  
Communications Committee member (2011-Present)  
MAC Messages Coordinator (2012-Present)  
Chair (2013-2014)  
Honors & Awards Committee member (2011-2014)  
MACMLA 2013 Conference (2012-2013)  
Local Arrangements Team: Communications, Social Media Chair  
Program Team: Posters  
Papers Chair  
Conference Co-Chair  
Research and Assessment Committee (2016-2019)

National Network of Libraries of Medicine (NN/LM) Southeastern/Atlantic (SE/A) Region  
Outreach to Health Professionals Committee member (2011-2016)
James Madison University
Honors Council (2011-Present)
Institutional Review Board member (2013-Present)
Health Sciences Writing Committee (2016-Present)

Libraries & Educational Technologies
Collection Development Committee, Applied Health Sciences cluster representative (2012-2014)
Faculty Fellow for the Writing Center (2014-2015)
Instruction Committee member (2012-2013)
Instructional Design & Online Education Librarian search committee member (2013)
Management Council, At-Large Faculty Representative (2015-2017)
Scholarly Communications Task Force (2012-2013)
Scholarly Communications Steering Committee (2013-2014)
Science & Mathematics Librarian search committee chair (2016)

Professional Development
LOEX Annual Conference
The Consumer Health Library: A Site for Service, Education, & Hope
Working at the Speed of Trust
Getting Started with 3D Printing
JMU’s New Instructional Faculty Diversity Recruitment & Retention Strategies
Virginia Scholarly Communication Interest Group Meeting
Instructional Design for Medical Librarians
Active Learning in the Classroom
Data Visualization Skills and Tools for Librarians
Teaching and Learning with Technology Conference
Leadership for Supervisors
PRIM&R’s Primer on the Notice of Proposed Rulemaking (NPRM)
Scholarly Communication Roadshow
Institute for Research Design in Librarianship
Hot Topics in Online Survey Research: Subject Identification, Consent, and Risk
Data Security Incidents: The Role of IRBs and Information Security
Beyond the Search II: Data Management for Systematic Reviews
Assignment Design: Creating Aligned Assignments
Beyond the Search I: Protocol Development and Methodology for Systematic Reviews
Instructional Skills for Health Sciences Librarians
Camtasia

May 5-7, 2016
April 26, 2016
April 6, 2016
March 30, 2016
March 16, 2016
January 15, 2016
December 2, 2015
November 2, 2015
October 28, 2015
October 26, 2015
October 21-Nov. 18, 2015
September 15, 2015
August 6, 2015
July 13-24, 2015
March 12, 2015
February 26, 2015
December 3, 2014
November 13, 2014
October 22, 2014
August 21, 2014
July 22, 2014
Doing It Your Way: Approaches to Research Data Management for Libraries
Creating Interactive Tutorials
Teaching the Adult Learner
Gathering and Using Formative Assessment
Achieving Meaningful Use: Using Standards to Bring Medical Information to Practitioners and Patients
CITI Program IRB Member-Basic Course
Personal Genomics, Personalized Medicine & You
NLM Biomedical Informatics Outreach Course
The Evolution of Research Data: Strategies for Curation and Data Management
Teaching from the Back of the Room
Partnering to Prevent Diagnostic Error: Librarians on the Inside Track
Research Data Symposium
ACRL Scholarly Communications Roadshow
Objective Writing for Library Instruction
EBM and the Medical Librarian

Affiliations/Memberships

Academic and College Research Libraries (ACRL)
  Distance Learning section
  Health Sciences interest group
  Instruction section
American Library Association
Medical Library Association
  Collection Development section
  Medical Informatics section
  Nursing & Allied Health Resources section
Mid-Atlantic Chapter of the Medical Library Association
Phi Beta Kappa
Curriculum Vitae
Christina K. Lam PhD, RN
2866 Pin Oak Drive
Harrisonburg, Virginia 22801
540-550-7953 ♦ Russeck@jmu.edu

Education
Ph.D. Nursing College of Nursing, Villanova University
May 2016 Villanova, PA

Master of Science, Nursing Education Duke University
Education May 2009 Durham, NC

Bachelor of Science, Nursing James Madison University
May 2005 Harrisonburg, VA

Professional Licensure
2007-Present Registered Nurse License
Commonwealth of Virginia #0001206216

2005-2007 Registered Nurse License
State of North Carolina

Professional Certifications
2007-Present Human Subjects Certification
Office of Extramural Research
National Institutes of Health

2004-Present Basic Life Support
American Heart Association

Professional Memberships
2012-current Virginia Nurses Association
American Nurses Association

2009-current National League for Nursing

2009-current Graduate Nurse Network
College of Nursing
Villanova University

2008-current Sigma Theta Tau International
James Madison University
Pi Mu Chapter
Treasurer 2014-2016
Treasurer Mentee 2013-2014
Professional Work History

Instructor

- BSN Program Coordinator (2015-current)
- Chronic Illness Minor Coordinator (2012-2015)
- Undergraduate Clinical Coordinator (2014)

Department of Nursing
James Madison University
Harrisonburg, Virginia

August 2012 - current

- Instructor
- BSN Program Coordinator (2015-current)
- Chronic Illness Minor Coordinator (2012-2015)
- Undergraduate Clinical Coordinator (2014)

Department of Nursing
James Madison University
Harrisonburg, Virginia

April 2007 - July 2012

Registered Nurse II, Charge Nurse
Progressive Care Unit
Carilion New River Valley Medical Center
Christiansburg, Virginia

January - April 2011

Nurse Educator Internship
James Madison University
Harrisonburg, Virginia

Clinical Instructor:
Adult medical-surgical clinical rotation

Guest Lecturer:
The Nurse Leader
Adult Health I

August 2008 - August 2011

Adjunct Faculty
Wytheville Community College
Wytheville, Virginia

February - March 2009

Nurse Educator Residency
University of the West Indies
Mona, Jamaica

Clinical Instructor:
Pediatric Medical-Surgical Clinical Rotation

Guest Lecturer:
Professional Ethics
Pathophysiology I

June 2005 - January 2007

Registered Nurse
New Graduate Nurse Preceptor (2006)
Cardiology Step-down Unit
Duke University Hospital
Durham, North Carolina

Teaching
James Madison University
Living Successfully with Chronic Illness (NSG 391): Summer 2014 *(new online format SP 2014, Canvas), Spring 2014, Fall 2013, 
Clinical Applications & Reasoning in Nursing II (NSG 356): Spring 2016, Fall 2016 (Course Coordinator), Spring 2015 (Course Coordinator), Spring 2014, Fall 2013,  
Clinical Applications & Reasoning in Nursing II Clinical (NSG 356-L)  
Clinical Applications & Reasoning in Nursing I Lab (NSG 352-L) Spring 2016, Fall 2012  
Adult Health Medical-Surgical Clinical II (NSG 481)  
Advising: BSN Nursing students (10); Chronic Illness Minor (250 declared)  

Wytheville Community College  
Principles of Health Assessment (2009, 2011)  
Introduction to Acute Care (2009)  
Medical-Surgical I & II (2009)  
Long-term Care (2008)  
Nursing Fundamentals I (2008)  

Selected Publication  

Research  


Funded Research  

Professional Development  
Conferences  
Southern Nursing Research Society, 2016  
Virginia Nurses Association, Spring Conference, 2016  
Virginia Nurses Association, Legislative Day, 2016  
American Association of Colleges of Nursing, Baccalaureate Education Conference, 2015  
American Association of Colleges of Nursing, Hot Issues Conference, 2015  
Virginia Nurses Association, Staffing Trends Conference, 2015
MACMLA Research & Assessment Grant

American Association of Colleges of Nursing, Baccalaureate Education Conference, 2013
Eastern Nursing Research Society, 2011

Webinars
Clinical Assessment 1: Medication Administration & Evaluation (Nurse Tim, Inc.), 2014
Clinical Preceptors: Partners for Program Success (Nurse Tim, Inc.), 2014
ExamSoft Introduction, 2013

Center for Faculty Innovation, James Madison University, 2012-Present
Here to Help Workshop, 2015
Teaching & Engaging the Millennial Learner, 2014
Developing Student Collegiality through Peer Evaluations, 2013
The Flipped Classroom, 2013
Becoming a Learner-Centered Instructor, 2013
Teaching Analysis Poll, 2012
Peer Orientation & Development Group First year faculty, 2012
Adapting Pedagogies to Large classes, 2012

Center for Instructional Technology, James Madison University, 2013-Present
Using Qualtrics, 2014

Professional Research Presentations


Professional Educational Presentations


Lam, C. (2009). “Pathophysiology of Heart Failure” and “Ethical Issues in Nursing Practice: Informed Consent.” Lectures presented to junior undergraduate nursing students at the University of the West Indies, School of Nursing. Mona, Jamaica.


**Service**

*James Madison University*

**May 2015**

College of Health & Behavioral Studies Commencement, Faculty Reader

**August 2015-current**

College of Health & Behavioral Studies Curriculum & Instruction Committee member

**August 2015-current**

Undergraduate Curriculum Committee Chair

**May 2015**

College of Health & Behavioral Studies Commencement, Faculty Usher

**February, March 2015**

CHOICES Open House Presenter & Volunteer

**January 2015-current**

Faculty Governance Committee Parliamentarian

**January 2015-current**

Undergraduate Admissions & Progression Committee

**January 2015-current**

Faculty Search Committee

**August 2012-May 2015**

Undergraduate Curriculum Committee, Semester 2 Coordinator

**January-May 2014**

Graduate Student Preceptor Therese Collins, Nurse Educator Student

**April 2014**

JMU CHOICES Tour Volunteer
March 3, 2014  Guest Panelist: NUTR 385 Nutrition Throughout the Life Cycle, Dr. Torisky

December 2013-current  Undergraduate Clinical Coordinator

November 11, 2013  Undergraduate Open House Volunteer

August 2012-current  Chronic Illness Minor Coordinator

February 2013  Poverty Simulation Volunteer

October 2012  Poverty Simulation Volunteer

Community
April 2011  Carilion Clinic
Volunteer, 5K benefiting American Heart Association and Hurricane Relief Fund

October 2010  Carilion Clinic
Volunteer 5k, benefiting American Heart Association

Honors & Recognition
May 2015, 2016  JMU Nursing Convocation
Selected to pin graduating BSN class of 2015

September 2014  American Association of Colleges of Nursing & Jonas Family Foundation
Jonas Scholar Fellowship, Leadership

May 2014  JMU Nursing Convocation
Selected to pin graduating BSN class of 2014

July 2012  Carilion Clinic
5 year service recognition

November 2010  Carilion Clinic
Clinical Nurse Promotion
Registered Nurse II

December 2009  Beta Epsilon Chapter, Sigma Theta Tau
Poster selected for full conference sponsorship

July 2006  Duke University Hospital
Clinical Nurse Ladder Promotion
Registered Nurse II
June 2006

Duke University Hospital
Patient Service Star Award
Appendix B: Evidence-based practice competencies for practicing registered professional nurses

1. Questions clinical practices for the purpose of improving the quality of care
2. Describes clinical problems using internal evidence
3. Participates in the formulation of critical questions using PICOT format
4. Searches for external evidence to answer focused clinical questions
5. Participates in critical appraisal of pre-appraised evidence
6. Participates in the critical appraisal of published research studies to determine their strength and applicability to clinical practice
7. Participates in the evaluation and synthesis of the body of evidence gathered to determine its strength and applicability to clinical practice
8. Collects practice data systematically as internal evidence for clinical decision-making in the care of individuals, groups, and populations
9. Integrates evidence gathered from external and internal sources in order to plan evidence-based practice changes
10. Implements practice changes based on evidence and clinical expertise and patient preferences to improve care processes and patient outcomes
11. Evaluates outcomes of evidence-based decisions and practice changes for individuals, groups, and populations to determine best practices
12. Disseminates best practices supported by evidence to improve quality of care and patient outcomes
13. Participates in strategies to sustain an evidence-based practice culture
Appendix C: Research Instruments

Survey Questions

Q1 Enter your JMU eID (ex: schubecf) *this is required if you want to receive the incentive*

Q2 How many years have you had a smartphone?

Q3 How many years have you had an iOS device (ex: iPhone or iPad)?

Q4 The following section focuses on your experience in NSG 454L Transition to Practice.

Q5 Please identify your location for NSG 454L [Depending on assignment method, this question might be modified as free text or a checkboxalist from the department]
   - [Location 1] (1)
   - [Location 2] (2)
   - [Location 3] (3)

Q6 Do you use an electronic health record (EHR) or electronic medical record (EMR) at [Q5 Location Answer]?
   - Yes (1)
   - Sometimes (2)
   - No (3)
   - Other (4) ____________________

Q7 Do you use SimChart at [Q5 Location Answer]?
   - Yes (1)
   - Sometimes (2)
   - No (3)
   - Other (4) ____________________

Q8 Do you use your smartphone during your NSG 454L?
   - Yes (1)
   - Sometimes (2)
   - No (3)
   - Other (4) ____________________

Q9 Do you use your iPad during your NSG 454L?
   - Yes (1)
   - Sometimes (2)
   - No (3)
   - Other (4) ____________________

Q10 What resources do you use as part of your NSG 454L clinical days?
    - BEFORE (1)  DURING (2)  AFTER (3)
Course materials (ex: lecture slides) □ □ □ □
Textbook (2) □ □ □ □
Micromedex (3) □ □ □ □
Lexi-Comp (4) □ □ □ □
Videos (5) □ □ □ □
SimChart (6) □ □ □ □
LabTestsOnline.org (7) □ □ □ □
Google (8) □ □ □ □
DynaMed Plus (10) □ □ □ □
Other (9) □ □ □ □

Q11 Here are 7 statements about evidence-based practice (EBP) in your NSG 454L clinical setting. Please select the option that best describes your agreement or disagreement with each statement. There are no right or wrong answers.

<table>
<thead>
<tr>
<th>Experts in EBP are available in my clinical setting (1)</th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Neither Agree nor Disagree (3)</th>
<th>Agree (4)</th>
<th>Strongly Agree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In my clinical setting, I have access to databases that have full length nursing research articles (2)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I believe my clinical setting values evidence based nursing practice (3)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>The nurses at my clinical setting</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
discuss research relevant to our clinical practice (4) The other healthcare providers I interact with support EBP changes based on nursing research (5) The nurses in my clinical setting base their practice on the best evidence (6) My instructor makes sure that I have access to relevant research at my clinical site (7)
Q12 The following section focuses on your experience in NSG 456 Capstone

Q13 Please identify your location for NSG 456 Capstone [Depending on assignment method, this question might be modified as free text or a checkbox a list from the department]
   ○ [Location 1] (1)
   ○ [Location 2] (2)

Q14 Do you use an electronic health record (EHR) or electronic medical record (EMR) at [Q13 Location]?
   ○ Yes (1)
   ○ Sometimes (2)
   ○ No (3)
   ○ Other (4) ____________________

Q15 Do you use SimChart at [Q13 Location]?
   ○ Yes (1)
   ○ Sometimes (2)
   ○ No (3)
   ○ Other (4) ____________________

Q16 Do you use your smartphone during your NSG Capstone clinical?
   ○ Yes (1)
   ○ Sometimes (2)
   ○ No (3)
   ○ Other (4) ____________________

Q17 Do you use your iPad during your NSG Capstone clinical?
   ○ Yes (1)
   ○ Sometimes (2)
   ○ No (3)
   ○ Other (4) ____________________

Q18 What resources do you use as part of your NSG 456 Capstone clinical days?

<table>
<thead>
<tr>
<th>Resources</th>
<th>BEFORE (1)</th>
<th>DURING (2)</th>
<th>AFTER (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course materials</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(ex: lecture slides)</td>
<td></td>
<td></td>
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<tr>
<td>(1)</td>
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<tr>
<td>Textbook (2)</td>
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<tr>
<td>Micromedex (3)</td>
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</tr>
<tr>
<td>Lexi-Comp (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Videos (5)</td>
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<td>SimChart (6)</td>
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<td>LabTestsOnline.org (7)</td>
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<tr>
<td>Google (8)</td>
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</tbody>
</table>
Q19 Here are 7 statements about evidence-based practice (EBP) in your NSG 456 Capstone clinical setting. Please select the option that best describes your agreement or disagreement with each statement. There are no right or wrong answers.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree (1)</th>
<th>Disagree (2)</th>
<th>Neither Agree nor Disagree (3)</th>
<th>Agree (4)</th>
<th>Strongly Agree (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experts in EBP are available in my clinical setting (1)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>In my clinical setting, I have access to databases that have full length</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>nursing research articles (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I believe my clinical setting values evidence based nursing practice</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>(3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The nurses at my clinical setting discuss research relevant to our clinical</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>practice (4)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>The other healthcare providers I interact with support EBP changes</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

DynaMed Plus (10) ☐ ☐ ☐ ☐ Other (9) ☐ ☐ ☐ ☐
based on nursing research. (5)
The nurses in my clinical setting base their practice on the best evidence (6)
My instructor makes sure that I have access to relevant research at my clinical site (7)

Semi-structured In-depth Interview Guide Draft

WORK ENVIRONMENT
Tell me about the last time you were on your clinical rotation for Capstone at [location].
What did you do for your pre-clinical preparation? How many patients did you see? How long was your shift? What questions came up during clinical? How did your coursework prepare you for the clinical cases? What did you discuss during your debrief after clinical? How did you write up your clinical case at the end of the day?

How does it compare/contrast with your experiences at [other location or rotation, based on survey response]?

EVIDENCE-BASED PRACTICE
One of the trends in health care today is evidence-based practice. How do you define evidence-based practice?

Recently, some nursing researchers developed a set of 13 evidence-based practice competencies for practicing registered professional nurses. How do these competencies compare to your experience with evidence-based practice? [provide EBP competencies list]

What are evidence-based practices your preceptor performs during your rotation?

What evidence-based practices do you see other nurses on the unit perform during your rotation?

How do your course instructors demonstrate evidence-based practice during class?

RESEARCH
Now, some of the evidence-based practice competencies rely on finding, appraising and applying evidence from the research literature. How do you balance these expectations with the other evidence-based practice responsibilities you need to complete during clinical?

What factors determine when you should or shouldn’t look for external evidence to answer a clinical question? When you do decide to look for external evidence, where do you look for answers? How do you decide which resource to use? What helps you look for external evidence? What prevents you from looking for external evidence? How do you evaluate the information you find? After finding information you trust, how do you apply that information to the patient/problem?

CONCLUSION
Thank you so much for your time today. I appreciate you sharing your experiences about evidence-based practice in the clinical settings. Are there any other thoughts or comments you would like to add about learning evidence-based practice and your experiences in clinical?