Doctor of Nursing Practice-Anesthesia Doctoral Project Guide

Class of 2022 Edition

Harris College
of Nursing & Health Sciences
Nurse Anesthesia
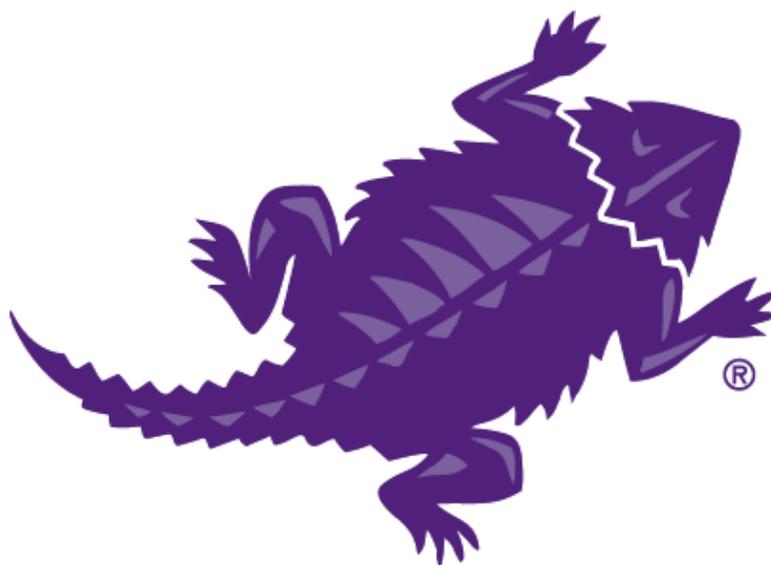
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Table of Contents

Section I: DNP-A Scholarly Project
Philosophy and Purpose

Overview of Case-Study Focused Project

SoA Faculty Information and Interests

Faculty Advising

Section II: Case Study Focused Scholarly Project
In-Depth Examination of Clinical Case Study

Elements of Scholarly Work
1. Problem identification
2. Detailed literature review
3. Development of a strategy to address the problem
4. Plan for implementation
5. Dissemination
6. Final paper

Example of a Doctoral Project

Section III: The DNP-A Scholarly Portfolio
What Is a Scholarly Portfolio?

Reflective Self-Evaluations
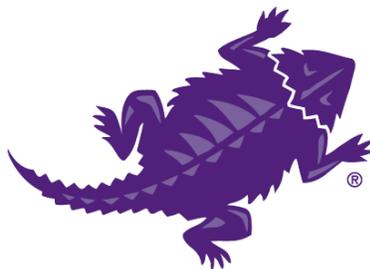
Section IV: Timeline
DNP-A Scholarly Project Timeline and Portfolio Requirements Semesters 1–9

Section V: Doctoral Presentation
Doctoral Presentation

Evaluation: Poster Evaluation Rubric

References

Section I
DNP-A Scholarly Project

**Philosophy and Purpose
Overview of Case-Study Focused Project
SoA Faculty Information and Interests
Faculty Advising**

Philosophy and Purpose

The Doctor of Nursing Practice-Anesthesia (DNP-A) Scholarly Project is about process and product, both aspects carry equal importance. The DNP-A Scholarly Project process is organized and well-delineated to guide the clinically oriented doctoral student to incorporate specific knowledge and skill sets that ultimately improve healthcare delivery, clinical practice, and patient care. The School of Nurse Anesthesia (SoA) DNP-A Scholarly Project adheres to The Essentials of Doctoral Education for Advanced Nursing Practice put forth by the American Association of Colleges of Nursing (AACN)[1] and the goals, requirements, and competencies of the Council on Accreditation of Nurse Anesthesia Educational Programs (COA).[2]

AACN Final DNP Project
"Doctoral education, whether practice or research, is distinguished by the completion of a specific project that demonstrates synthesis of the student's work and lays the groundwork for future scholarship. For practice doctorates, requiring a dissertation or other original research is contrary to the intent of the DNP. The DNP primarily involves mastery of an advanced specialty within nursing practice. Therefore, other methods must be used to distinguish the achievement of that mastery. Unlike a dissertation, the work may take a number of forms."[1] One example of a final DNP project is a practice change initiative. This may be represented by a pilot study, a program evaluation, a quality improvement project, an evaluation of a new practice model, a consulting project, or an integrated systematic literature review. Additional examples of a DNP final product include a research utilization project, practice topic dissemination, substantive involvement in a larger endeavor, or other practice project. A DNP project would be expected to include a manuscript submitted for publication. The theme that links these forms of scholarly experiences is the use of evidence to improve either practice or patient outcomes incorporating synthesis and scholarship.[1]

"The final DNP project produces a tangible and deliverable academic product that is derived from the practice immersion experience and is reviewed and evaluated by an academic committee. The final DNP product documents outcomes of the student's educational experiences, provides a measurable medium for evaluating the immersion experience, and summarizes the student's growth in knowledge and expertise. The final DNP product should be defined by the academic unit and utilize a form that best incorporates the requirements of the specialty and the institution that is awarding the degree. Whatever form the final DNP product takes, it will serve as a foundation for future scholarly practice."[1]

Essentials of Doctoral Education for Advanced Nursing Practice provide the framework for assessment of outcome competencies.[1]

I. Scientific Underpinnings for Practice
The DNP program prepares the graduate to:
  A. Integrate nursing science with knowledge from ethics, the biophysical, psychosocial, analytical, and organizational sciences as the basis for the highest level of nursing practice.
  B. Use science-based theories and concepts to:
    1. determine the nature and significance of health and health care delivery phenomena;
    2. describe the actions and advanced strategies to enhance, alleviate, and ameliorate health and health care delivery phenomena as appropriate; and evaluate outcomes.
  C. Develop and evaluate new practice approaches based on nursing theories and theories from other disciplines.

II. Organizational and systems leadership for quality improvement and systems thinking
The DNP program prepares the graduate to:
  A. Develop and evaluate care delivery approaches that meet current and future needs of patient populations based on scientific findings in nursing and other clinical sciences, as well as organizational, political, and economic sciences.
  B. Ensure accountability for quality of health care and patient safety for populations with whom they work.
    1. Use advanced communication skills/processes to lead quality improvement and patient safety initiatives in health care systems.
    2. Employ principles of business, finance, economics, and health policy to develop and implement effective plans for practice-level and/or system-wide practice initiatives that will improve the quality of care delivery.
    3. Develop and/or monitor budgets for practice initiatives.
    4. Analyze the cost-effectiveness of practice initiatives accounting for risk and improvement of health care outcomes.
    5. Demonstrate sensitivity to diverse organizational cultures and populations, including patients and providers.
  C. Develop and/or evaluate effective strategies for managing the ethical dilemmas inherent in-patient care, the health care organization, and research.

III. Clinical scholarship and analytical methods for evidence-based practice
The DNP program prepares the graduate to:
  A. Use analytic methods to critically appraise existing literature and other evidence to determine and implement the best evidence for practice.
  B. Design and implement processes to evaluate outcomes of practice, practice patterns, and systems of care within a practice setting, health care organization, or community against national benchmarks to determine variances in practice outcomes and population trends.
  C. Design, direct, and evaluate quality improvement methodologies to promote safe, timely, effective, efficient, equitable, and patient-centered care.
  D. Apply relevant findings to develop practice guidelines and improve practice and the practice environment.

E. Use information technology and research methods appropriately to:
1. collect appropriate and accurate data to generate evidence for nursing practice
2. inform and guide the design of databases that generate meaningful evidence for nursing practice
3. analyze data from practice
4. design evidence-based interventions
5. predict and analyze outcomes
6. examine patterns of behavior and outcomes
7. identify gaps in evidence for practice
F. Function as a practice specialist/consultant in collaborative knowledge-generating research.
G. Disseminate findings from evidence-based practice and research to improve healthcare outcomes

IV. Information systems/technology and patient care technology for the improvement and transformation of health care

The DNP program prepares the graduate to:
A. Design, select, use, and evaluate programs that evaluate and monitor outcomes of care, care systems, and quality improvement including consumer use of health care information systems.
B. Analyze and communicate critical elements necessary to the selection, use and evaluation of health care information systems and patient care technology.
C. Demonstrate the conceptual ability and technical skills to develop and execute an evaluation plan involving data extraction from practice information systems and databases.
D. Provide leadership in the evaluation and resolution of ethical and legal issues within healthcare systems relating to the use of information, information technology, communication networks, and patient care technology.
E. Evaluate consumer health information sources for accuracy, timeliness, and appropriateness.

V. Health care policy for advocacy in health care

The DNP program prepares the graduate to:
A. Critically analyze health policy proposals, health policies, and related issues from the perspective of consumers, nursing, other health professions, and other stakeholders in policy and public forums.
B. Demonstrate leadership in the development and implementation of institutional, local, state, federal, and/or international health policy.
C. Influence policy makers through active participation on committees, boards, or task forces at the institutional, local, state, regional, national, and/or international levels to improve health care delivery and outcomes.
D. Educate others, including policy makers at all levels, regarding nursing, health policy, and patient care outcomes.
E. Advocate for the nursing profession within the policy and healthcare communities.
F. Develop, evaluate, and provide leadership for health care policy that shapes health care financing, regulation, and delivery.
G. Advocate for social justice, equity, and ethical policies within all healthcare arenas.

VI. Interprofessional collaboration for improving patient and population health outcomes

The DNP program prepares the graduate to:
A. Employ effective communication and collaborative skills in the development and implementation of practice models, peer review, practice guidelines, health policy, standards of care, and/or other scholarly products.
B. Lead interprofessional teams in the analysis of complex practice and organizational issues.

C. Employ consultative and leadership skills with intraprofessional and interprofessional teams to create change in health care and complex healthcare delivery systems.

VII. Clinical prevention and population health for improving the nation's health
The DNP program prepares the graduate to:
A. Analyze epidemiological, biostatistical, environmental, and other appropriate scientific data related to individual, aggregate, and population health.
B. Synthesize concepts, including psychosocial dimensions and cultural diversity, related to clinical prevention and population health in developing, implementing, and evaluating interventions to address health promotion/disease prevention efforts, improve health status/access patterns, and/or address gaps in care of individuals, aggregates, or populations.
C. Evaluate care delivery models and/or strategies using concepts related to community, environmental and occupational health, and cultural and socioeconomic dimensions of health.

VIII. Advanced nursing practice
The DNP program prepares the graduate to:
A. Conduct a comprehensive and systematic assessment of health and illness parameters in complex situations, incorporating diverse and culturally sensitive approaches.
B. Design, implement, and evaluate therapeutic interventions based on nursing science and other sciences.
C. Develop and sustain therapeutic relationships and partnerships with patients (individual, family or group) and other professionals to facilitate optimal care and patient outcomes.
D. Demonstrate advanced levels of clinical judgment, systems thinking, and accountability in designing, delivering, and evaluating evidence-based care to improve patient outcomes.
E. Guide, mentor, and support other nurses to achieve excellence in nursing practice.
F. Educate and guide individuals and groups through complex health and situational transitions.

Use conceptual and analytical skills in evaluating the links among practice, organizational, population, fiscal, and policy issues.

Overview of Case Study Focused Scholarly Project

The DNP-A case study focused project may vary in its form and focus but is always based on use of evidence to improve either practice or patient outcomes incorporating synthesis and scholarship. Evidence-based practice embodies the philosophical underpinning for all DNP-A clinical projects. Evidence-based practice is a process that includes locating, appraising, and applying quality scientific evidence.[3] Evidence-based practice is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients.[3,4] The RRNA uses the portfolio process to gain new knowledge from primary research, translate existing research findings, and/or focus on implementing known best practices. Application of evidence-based methodology through the translation of research, evaluation of practice, and collaboration results in improvement of healthcare practice and outcomes.[5]

The case study focused scholarly project consists of an evidence-based inquiry that is centered around a problem that is identified in the clinical setting. The doctoral student will utilize the scholarship skills gained from doctoral coursework to date to apply academically sound scholarship skills with the goal of improving clinical practice. The elements (also referred to as "steps") of the scholarly work include**: 1) identification of a problem**; **2) conducting a detailed literature review**; **3) developing a strategy to address the problem**; **4) making a plan for implementation**; **5) dissemination of the scholarly project**; and finally, **6)** bringing together all elements into a **final scholarly paper** that is inclusive of all elements.

DNP-A case study focused scholarly project objectives:
The DNP-A clinical project is a scholarly process that will assist the DNP-A student to:
- Appraise evidence to implement the best evidence for practice;
- Develop an evidence-based project through problem identification, a review of the literature, identification of a strategy to address the problem, plan for implementation, dissemination, and evaluation. Culmination of the project brings together all elements into a final scholarly paper;
- Design processes to evaluate outcomes of practice and systems of care;
- Use information technology systems for storage and retrieval of data;
- Apply analytical methodology to synthesize existing literature relevant to nurse anesthesia practice;
- Disseminate project results in a professional manner both written and orally;
- Develop strategies to translate research into practice.

SoA Faculty Information and Interests

Ron Anderson, MD
Associate Professor of Professional Practice
BS (University of Texas) 1981; MD (Texas Tech University School of Medicine) 1987
Project interests include obstetric and regional anesthesia, pain management, impaired cognitive development following fetal or early childhood anesthetic exposure, medical ethics, effective healthcare resource utilization, obstructive sleep apnea, and perioperative medical optimization.

Dennis J Cheek, PhD, RN, FAHA
Professor
BSN (California State University, Fresno), 1982; MSN (University of California, San Francisco), 1988; PhD (University of Nevada, Reno), 1996;
Project interests include cellular & biological Sciences, the genetic/genomic cellular/tissue expressions and subsequent clinical presentation, the role of functioning endothelial cells and subsequent causative factors involved in the development of dysfunctional endothelial cells including the genetic and genomic implications, the role of HSP72 in acute heat shock as well as heat acclimation during bouts of exercise. Clinical Interests: cardiovascular disease in women and men, disparities in risk factors, clinical presentations and treatment of men and women with heart disease, the role of hormones in heart disease, the role of aerobic versus resistive exercise as a preventive measure in the development of heart disease.
An additional growing area of clinical interest is the interplay of pharmacology and the genetic makeup of the patient or pharmacogenomics and the increase translation of pharmacogenomics into clinical practice so that adverse drug reactions can be reduced or avoided and doses are optimized.

Greg Collins, DNP, CRNA
Assistant Professor of Professional Practice
BSN (West Texas A&M University), 2002; MSNA (Texas Christian University), 2006; DNP (Texas Christian University), 2018.
President of Operations for the Texas division of EmergencHealth. He maintains a general clinical practice in Granbury, TX. Dr. Collins completed both his initial anesthesia training and subsequent Doctor of Nursing Practice degree at Texas Christian university. He is a veteran of the US Army Reserves having delivered down-range anesthesia in support of both Operation Iraqi Freedom and Operation New Dawn. Dr. Collins currently serves as President of the Texas Association of Nurse Anesthetists (TxANA), representing more than 4,500 CRNAs.

M Roseann Diehl, PhD, DNP, CRNA, CHSE-A
Professor of Professional Practice
BSN (University of Texas), 1987; MHS (Texas Wesleyan University), 1997; DNP (Texas Christian University), 2010; PhD (Texas Woman's University), 2016.

Project interests include systematic reviews and clinical projects related to simulation, anesthesia crisis resource management, debriefing, self-assessment/reflection, nurse anesthesia education, regional anesthesia and portfolio management.

Vaughna Galvin, DNAP, CRNA
Assistant Professor of Professional Practice
BSN (Barton College), 1997; MA (East Carolina University), 2002; MSNA, (Texas Christian University), 2005; DNAP, (Virginia Commonwealth University), 2011.
Project interests include: Gross anatomy, regional anesthesia anatomy, point-of-care ultrasound assessment, anesthesia crisis resource management, and critical scenario simulation.

James Holcomb, DNP, CRNA
Assistant Professor of Professional Practice
BA (Texas Tech University), 1993; Diploma (Methodist Hospital School of Nursing, Lubbock), 1995; BSN (West Texas A & M University), 1997; MHS (Texas Wesleyan University), 1998; Certificate in Nurse Anesthesia (Texas Wesleyan University), 1999; DNP (Texas Christian University), 2012.

Monica Jenschke, PhD, CRNA
Associate Professor of Professional Practice
Assistant Director, Advanced Pain Management Fellowship.
Director, DNP-A Projects
BSN (University of Texas Health Science Center School of Nursing at San Antonio); MHS (Texas Wesleyan University); PhD (University of North Texas Health Science Center at Fort Worth).
Project interests include: The effect of aging on postoperative pain, use of multimodal analgesia/anesthesia techniques, NMDA antagonists in reducing opioid tolerance and opioid-induced hyperalgesia, perioperative fluid management, pharmacology, incorporation of TeamSTEPPS into healthcare culture, and fostering health and wellness in nurse anesthesia.

Jennifer Oakes, DNAP, CRNA, CHSE
Associate Director
Associate Professor of Professional Practice
DNAP (Virginia Commonwealth University) 2011; MSNA (Virginia Commonwealth University) 2010; BSN (University of Phoenix) 2008.
Project interests include: Anesthesia Crisis Resource Management, Simulation, professional aspects, conflict resolutions and curriculum development.

Julie A Pearson, PhD, CRNA
Adjunct Faculty
BSN (Rush University), 1980; BS Nurse Anesthesia (George Washington University), 1987; MSN (Rush University), 1993; PhD (Virginia Commonwealth University), 2006.

Project interests include: professional satisfaction, program accreditation, clinical outcomes, competence and confidence, pediatric anesthesia, professional socialization, leadership development.

J Dru Riddle, PhD, DNP, CRNA, FAAN
Associate Professor of Professional Practice
BSN (Virginia Commonwealth University), 1999; MSN (Old Dominion University), 2002; DNP (Texas Christian University), 2011; PhD (Medical University of South Carolina), 2014.
 Project interests include: pharmacogenomics, OB anesthesia (high risk OB patient management), anesthesia pharmacology, preoperative evaluation and risk stratification, evidence-based practice, implementation science, cost-effectiveness analysis, cost-benefit analysis, JBI/systematic reviews, international anesthesia practice, healthcare economics, and healthcare policy.

Jackie Rowles, DNP, MBA, MA, CRNA, NSPM-C, ANP-BC, FNAP, DAIPM, FAAN
Associate Professor of Professional Practice
Director Advanced Pain Management Fellowship
BSN (Ball State University), 1982; MBA (University of Memphis), 1988; Certificate in Nurse Anesthesia (Truman Medical Center School of Nurse Anesthesia), 1994; MA Biology (University of Missouri Kansas City), 1994; Post Master's Certificate Adult Nurse Practitioner (Ball State University) 2013; DNP (Barry University) 2016.
 Project interests include: pain management, professional aspects, international anesthesia education and practice, competency assessment, wellness.

Robyn C Ward, PhD, CRNA
Director
Associate Professor of Professional Practice
BSN (Montana State University), 1990; MS Nurse Anesthesia (Georgetown University), 2000; PhD (Rush University), 2018.
 Project interests include: psychometrics of testing, lifelong learning, education and certification, simulation-based assessment for decision-making and competence, obstetric anesthesia, and regional anesthesia techniques.

Faculty Advising

Doctoral-prepared faculty in the school of nurse anesthesia will serve as primary advisors. Primary faculty advisors are paired with secondary advisors, which enhances oversight and feedback to the advisee. Advisor-advisee assignments will be made by the director and associate director.

Both faculty and students have specific responsibilities toward the progress of the project. Communication is extremely important throughout the entire project process and is the <u>student's overall responsibility</u>. The timeline and deadlines of each project are

designed to facilitate continual progress. Failure to meet requirements and deadlines may jeopardize timely completion of the project and ultimately, graduation. Delays or omissions in the timeline must be clearly discussed with faculty advisor and resolved. All projects are to be completed on time to avoid graduation delays. Some specific responsibilities of student and faculty are listed below:

Student responsibilities:
- Communicate regularly with primary advisor via in-person, phone, Zoom conferencing, and/or email. Keep all documentation of communications and replies for records.
- Closely follow the timeline for projects completing each requirement completely and on time. Uploads of all work must be submitted by the deadline, to the student's portfolio AND to D2L as assigned for that semester.
- It is the student's responsibility to adhere to the syllabus, the DNP guide and requirements in D2L to ensure timely submission of documents. Repeated faculty reminders may result in a grade of zero for that requirement and/or a grade of Incomplete for the semester.

Faculty responsibilities:
- Respond to student communications in a timely fashion.
- Provide, at a minimum, semester progress feedback, guidance, and evaluation.
- Communicate and coordinate student progress with the students themselves and with the secondary advisor.
- Provide guidance and formative feedback in construction of poster presentation for the annual Research Symposium held in late April or early May.
- Provide guidance and feedback for progression of case study focused scholarly project.

Section II
Case Study Focused Scholarly Project

In-Depth Examination of Clinical Case Study

The case study focused scholarly project represents an evidence-based inquiry process using scholarship skills, resulting in an academically sound product to improve clinical practice. The project interweaves phase I content (didactic courses) and phase II (clinical experience and courses). The scholarly work consists of six steps to be completed over the course of clinical practicums I, II, and III, and IV. Each step of the project is intended to build upon the previous steps to culminate into one final paper that includes each step and process.

Elements of Scholarly Work

The 6 elements (steps) include:

1. Problem identification;
2. Retrieval, review, and synthesis of existing evidence from the literature;
3. Development of a strategy to address the problem;
4. Plan for implementation;
5. Dissemination; and
6. Final paper.

Step 1: Problem Identification (Clinical Practicum I)
The RRNA will identify and define a problem related to nurse anesthesia practice; this will be the focus of the scholarly project. The problem will originate in the clinical milieu, and is clinically based, but the problem may include educational and/or professional components.

Through the course of clinical residency, students are exposed to a variety of clinical cases that represent the need to reference current literature. Students will select one case or problem of interest that identifies new research, techniques, and evidence-based practice. The case study focused project delves deeply into various aspects of clinical anesthesia integrating pharmacology, physiology, pathophysiology, and principles of translational research.

Step 2: Retrieval, review, and synthesis of existing evidence from the literature (Clinical Practicums I and II)

Literature reviews are a requirement for all projects. A review of the literature inclusive of an appraisal with implications and/or recommendations for practice offers breadth,

depth, and scope to a project. This step evaluates literature search skills and critical thinking. The literature review should be submitted in table format with an evidence appraisal table.

Deliverables for Steps 1 and 2 (Clinical Practicums 1 and 2)
1. Evidence Appraisal Table
An evidence appraisal table provides a wonderful snapshot and efficient method learn about topic. You likely have seen versions of these tables when reading systematic reviews and/or meta-analyses. Formulating an evidence appraisal table is excellent preparation for gathering information to provide a "bird's eye view" for any scholarly project. Collecting quality evidence is useful, but writing annotations for each reference, forces you to read each source more carefully. The information gathered is critically analyzed and visually compared. What is known, not known, and other gaps can more easily be identified during this process as well

2. Scholarly Project Paper #1
The scholarly project paper will demonstrate translation of research into practice and interdisciplinary collaboration to provide a basis for evaluation of patient care.[9] The scholarly project paper will be based on an actual patient encounter. Ideally, the selected case will be one where you personally provided the anesthesia. Recognizing that the case identification is early in the clinical residency, options for selecting a case may also come from observed events or even from a case that occurred at your clinical site, yet you were not directly involved. If you only observed or were not directly involved in the case, you must be able to obtain patient records and speak with individuals who were directly involved in the care of the patient.

The scholarly project is centered on an actual patient case. The direction of the project exploration can be 1) clinical, 2) educational, or 3) professional.

The case summary for a clinical, practice evaluative scholarly project should provide a thorough description of the patient, procedure, medications, perioperative issues, and actions taken to prevent or resolve issues. Consult with your faculty advisor and the paper by Shelton et al within the D2L course for guidance.

The format conforms to instructions from the AANA Foundation's "State of the Science" to include poster session guidelines for poster abstract submission to the Annual Congress and instructions for authors to submit a case report for publication in the *AANA Journal*.

The following format will be used for the Scholarly Project Paper #1; students will choose option 1 (clinical focus) or option 2 (educational or professional focus):

1. Clinical focus
    a. Structured abstract
        • Introduction
            o 1050 characters (including spaces) or less

- o Introduce focus of the report
- o Relevant etiology, epidemiology
- Case presentation
  - o 1400 characters (including spaces) or less
  - o Relevant patient history
  - o Perioperative course
- Discussion
  - o 1750 characters (including spaces) or less
  - o Present current literature and how it relates to the reported case

b. Key words, 3-5
c. Introduction
d. Case summary
e. Evidence Search Method
f. Review of the Literature
g. Synthesis of the Literature (Discussion)
h. Recommendations for practice (Conclusions)
i. Summary
j. Reference list

2. Educational or Professional focus
a. Structured abstract
- Background / Purpose / Question
  - o 875 characters (including spaces) or less
  - o Define the nature and significance of the problem
  - o Clearly stated purpose of the project
  - o Clearly stated questions that your project addresses
- Methods / Evidence Search
  - o 1050 characters (including spaces) or less
  - o Method clearly described and reproducible
  - o Database search and keywords clearly described and reproducible
  - o Outline statistical/analysis plan as appropriate
- Synthesis of Literature / Results / Discussion
  - o 1400 characters (including spaces) or less
  - o Clearly presented and consistent with purpose and questions
  - o Point out relevance of findings to other published work
  - o Highlight future directions of the research
- Conclusion / Recommendations for Practice
  - o 1050 characters (including spaces) or less
  - o Concise summary addressing relevance
  - o Provide recommendations for future practice

b. Key words, 3-5
c. Introduction
d. Case summary

e. Evidence Search Method
f. Review of the Literature
g. Synthesis of the Literature (Discussion)
h. Recommendations for practice (Conclusions)
i. Summary
j. Reference list

** *see Scholarly Project Templates in NRAN 88080 within D2L*

Step 3: Develop a Strategy to Address the Problem (Clinical Practicum II)

This step should demonstrate problem solving and critical thinking skills. Current methodologies and theories should be explored to identify applications pertinent to your chosen topic. The strategy must include the construction of a poster to be presented at both the TCU SOA Research Symposium and a chosen mode of dissemination. The format of the poster as well as the content will be guided and approved by your individual advisors. This process is fully described in Section V of this DNP Guide.

Step 4: Implementation (Clinical Practicum II)

Each project should have the ability to be presented in poster format. Participation in the TCU SOA Research Symposium is intended to be an evaluative, public speaking, and learning opportunity. As such, students present their posters in printed format and present verbal explanations of the case in question, the current and/or needed research regarding the topic, and recommendations for future practice. Formative feedback will be provided by faculty, which can be incorporated into the next step. See Section V of this DNP Guide for further details on 3MT presentation.

Step 5: Dissemination (Clinical Practicum III)

After successful completion of the Research Symposium experience, the students identify an appropriate mode of dissemination. Examples of dissemination include submission for publication, state or national presentation of poster, or clinical site education session. Approval of dissemination activity should be obtained from the advisor prior to dissemination. Evidence of dissemination must be present.

Step 6: Final Paper (Clinical Practicum IV)

Scholarly Project Paper #2 is the final paper, and will be completed by August 30th of the graduation year. Students incorporate the remaining elements of scholarly work into Scholarly Project Paper #1. The final Scholarly Project Paper #2 is representative of all 6 steps of the student's doctoral scholarly project. The student will provide a self-evaluation of the project in this final clinical practicum. This final paper should be in AMA format and include a table of contents, appropriate citations, and an appendix.

Example of Clinical Scholarly Project

Step 1: Problem Identification
The student participates in a case involving a patient who has a family history of malignant hyperthermia (MH). The 63-year-old male patient has undergone genetic and muscle biopsy testing with negative results for susceptibility to MH. The patient has received general total intravenous anesthesia (TIVA) twice in the past 15 years with no incidence of MH. The patient is scheduled to have an extensive abdominal procedure under general endotracheal anesthesia. During the procedure, the patient exhibits signs and symptoms of an MH crisis. Treatment is initiated, the MH crisis resolves, and the patient is taken to ICU for observation.

Step 2: Retrieval, review, and synthesis of existing evidence from the literature
The student performs a detailed literature review on the current research recommendations for prevention of MH, sensitivity and specificity of MH testing, background of MH, and treatment protocols.

Step 3: Develop a Strategy to Address the Problem
The student develops a model that will demonstrate correction of the problem. A poster is constructed to illustrate the above steps.

Step 4: Implementation
The student presents the poster at the TCU SOA Research Symposium. Formative feedback is received from TCU Faculty. The student modifies necessary areas of the poster and presentation in preparation for the next step (dissemination).

Step 5: Dissemination
The student identifies the most appropriate venue for dissemination. In this example, the student submits an abstract to the AANA Foundation, and the student's work is selected for the AANA Foundation's State of the Science at the next AANA Annual Congress. The student submits his/her poster for presentation at the AANA Annual Congress and prepares a slide presentation for Oral Presentation at the Annual Congress.

Step 6: Final Paper
The student compiles all work on the six elements/steps into the final paper and includes a self-evaluation of the project.

Example of an Educational Scholarly Project

Step 1: Problem Identification
The student participates in a case involving a patient who develops MH during general anesthesia. Upon alerting the OR staff, it is noted that the registered nurses in the operating room lack knowledge and training regarding MH protocols. A brief case summary describes the events surrounding the patient's care. The focus of the scholarly project will be on needed improvements to protocols and/or systems.

Step 2: Retrieval, review, and synthesis of existing evidence from the literature
The student performs a detailed literature review on the current research on teams, teamwork, communication, and knowledge/skills/attitude of OR personnel (anesthesia professionals, RNs, scrub techs, surgeons, and others) in emergent situations.

Step 3: Develop a Strategy to Address the Problem
The student develops a model that identifies need for education about MH and individual roles in a crisis. Adult learning principles are incorporated into the recommendations to address the problem. Recommendations include options for learning such as inservices, conference-style sessions, and simulations involving all services involved in managing a critical incident. A poster is constructed to illustrate the above steps.

Step 4: Implementation
The student presents the poster at the TCU SOA Research Symposium. Formative feedback is received from TCU Faculty. The student modifies necessary areas of the poster and presentation in preparation for the next step (dissemination).

Step 5: Dissemination
The student identifies the most appropriate venue for dissemination. In this example, the student submits an abstract to the AANA Foundation, and the student's work is selected for the AANA Foundation's State of the Science at the next AANA Annual Congress. The student submits his/her poster for presentation at the AANA Annual Congress and prepares a slide presentation for Oral Presentation at the Annual Congress.

Step 6: Final Paper
The student compiles all work on the six elements/steps into the final paper and includes a self-evaluation of the project.

Example of a Professional Scholarly Project

Step 1: Problem Identification
The setting is an outpatient surgery center in rural Texas. A patient develops MH during general anesthesia. The student, between cases and available to assist, joins in the resuscitation efforts. The signs and symptoms of MH are quickly identified, treatment is initiated, and the patient is stabilized. The patient is transferred to the closest major medical center 30 miles away via ambulance. Shortly after arrival to the medical center the patient decompensates and dies.
The outpatient surgery administration conduct an investigation and after-action report to examine the event. The after-action report explores patient screening for MH, the staff's response to the crisis, the facility's preparation for an MH case, determining stability of patient for transport, air vs ground transport capability, and coordination of communication among the surgery center, receiving hospital, and transport team.

Step 2: Retrieval, review, and synthesis of existing evidence from the literature

The after-action report identified a weakness in communication among the staff at the surgery center, the transport team, and receiving facility. The student delves into the literature and retrieves studies addressing effective, crisis management communication tools. The literature review examines root causes of communication issues and tools that can enhance clear, effective communication during a crisis.

Step 3: Develop a Strategy to Address the Problem
The student develops a model that demonstrates use of effective communication tools can improve patient outcomes. A poster is constructed to illustrate the above steps.

Step 4: Implementation
The student presents the poster at the TCU SOA Research Symposium. Formative feedback is received from TCU Faculty. The student modifies necessary areas of the poster and presentation in preparation for the next step (dissemination).

Step 5: Dissemination
The student identifies the most appropriate venue for dissemination. In this example, the student submits an abstract to the AANA Foundation, and the student's work is selected for the AANA Foundation's State of the Science at the next AANA Annual Congress. The student submits his/her poster for presentation at the AANA Annual Congress and prepares a slide presentation for Oral Presentation at the Annual Congress.

Step 6: Final Paper
The student compiles all work on the six elements/steps into the final paper and includes a self-evaluation of the project.

Section III
The DNP-A Scholarly Portfolio

All nurse anesthesia residents will maintain a portfolio

What is a scholarly portfolio?
A portfolio is an ongoing form of assessment that incorporates both formative and summative evaluation. This makes a portfolio highly suitable for monitoring student development as well as assessing and mentoring learners' competency development. Portfolios represent the underpinnings for competency-based education and evaluation where the learner plays a pivotal role in the driving process.

What is the theoretical underpinning for the scholarly portfolio?
The portfolio follows the *Collect, Select, Reflect, Connect* model by Johnson.[10] The portfolio addresses 3 domains, reflecting both quantitative and qualitative competencies: 1) professionalism/leadership, 2) clinical knowledge/skills, and 3) critical reflection. The portfolio should disclose exceptional development in each of these areas.

How does the portfolio link with the *Collect, Select, Reflect, Connect* model?
The *Collect, Select, Connect* aspects of the Johnson model are represented by the portfolio's chronicles of the student's accomplishments throughout the program, which include scholarly work, papers, case logs, and care plans. Portfolios are an innovative, competency-based, qualitative and quantitative collection of scholarly processes that provide evidence of learning.[1]

The *Reflect* component of the Johnson model is evident in the assembly of all components for the DNP-A portfolio, as each aspect requires reflection, synthesis, and self-appraisal.[10] This experience is transformational and provides the foundation for pursuit of enduring clinical scholarship. Reflective self-evaluations are incorporated throughout the curriculum and are a requirement in many of the doctoral courses. Students exposed to self-reflective activities can have a significant increase in the perception of their learning abilities. As a result, the student takes on more responsibility for learning and clinical practice evaluation.

How does the scholarly portfolio showcase my work in the DNP-A program?
The portfolio is a tool for organizing all DNP-A materials with the aim of allowing the student and faculty advisor to view the scope of their topics. It does not represent the sole deliverable product of the project, but rather a means of showcasing the student's progression toward completion of doctoral study. The portfolio also provides a measurable outcome of competency-based doctoral-level behaviors that can be evaluated by an academic committee.[12]

What other aspects of the DNP-A program allow me to *Reflect*?
Two additional requirements of the *Reflect* component of the Johnson model include reflective self-evaluation at 2 critical junctures of the DNP-A program: 1) the Advanced Crisis Resource Management (ACRM) simulation experience in the last year of the program; and 2) the Summative Reflective Self-Evaluation at the end of the program. Instructions for these two requirements follows.

1. Advanced Simulation Critical Self Reflection
- Complete within 2 weeks after your advanced simulation experience.
- Upload completed work to D2L in the appropriate clinical practicum.
- Upload completed work to portfolio using the title, "*Advanced Simulation Critical Self Reflection"*
- Address the following 6 topics in your self-reflection paper:

> 1. What did you learn from participating in advanced simulation?
> 2. What specific information you take back from simulation and use in your practice?
> 3. What performance aspects did you do well?
> 4. What performance aspects did you not do well?
> 5. As an observer of other simulated scenarios what are some things you learned from observing your peers' performance?
> 6. What future potential scenarios might be useful to CRNA practice?

- The advanced simulation critical self-reflection will be no more than 1200 words and reflect pertinent essentials of doctoral education (identify specific Roman numeral within the self-evaluation—see *Essentials* of Doctoral Education under Summative Reflective Self-Evaluation below; and full framework in Section I of this Guide).

- A reflective self-evaluation after advanced simulation contributes to the student's volume of work represented in their portfolio. It exemplifies the achievements of the program's goals and objectives, and how the student has incorporated the essentials of doctoral education for advanced practice nursing, demonstrating how this unique simulated experience has prepared each student for future practice.

2. Summative Reflective Self-Evaluation.
- A summative reflective self-evaluation in the 9th semester (clinical practicum IV) will discuss the student's portfolio representation of program goals and objectives achievement, incorporation of the doctoral education essentials for advanced practice nursing[1] into their professional practice preparation, and how the unique knowledge and skills related to the DNP-A has prepared them for future practice.
- Summative reflective self-evaluations will be at least 6 pages.

- **The summative reflective self-evaluation will address *Essentials* of Doctoral Education for Advanced Practice Nursing (see Section I for full framework of the *Essentials*):[1]**

     I. Scientific underpinnings for practice
     II. Organizational and systems leadership for quality improvement and systems thinking
     III. Clinical Scholarship and analytical models for evidence-based practice
     IV. Information systems/technology and patient care technology for the improvement and transformation of healthcare
     V. Health care policy for advocacy in health care
     VI. Interprofessional collaboration for improving patient and population health outcomes
     VII. Clinical prevention and population health for improving the nation's health
     VIII. Advanced nursing practice

Additional Scholarly Works of Choice (optional)
Individual projects provide evidence of scholarly work and of professional growth/contributions. Additional works allow self-direction and individual creativity. Explanation of how the additional work contributes to your professional development is required in each critical self-reflection.

Examples include but are not limited to: peer-reviewed publication, newspaper editorial, magazine article, peer-networking, professional membership, university or hospital committee membership, class spokesperson/president, international student exchange, mission trips, community activities, participation in research study, tutoring/student learning assistance, computer software/app/web site development, blogging, public relations, National Nurse Anesthetists Week activities, etc. The possibilities are endless and student creativity is encouraged.

Section IV
Timeline

DNP-A Scholarly Project Timeline and Portfolio Requirements Semesters 1–9

Semester	Items for Submission	Deadline for Submission
1 spring, online 2 summer, online	NRAN 81153 Emerging Science/Complexity • 2 concept maps • Science report (EBDB post) NRAN 81233 Decision Science • Cost effectiveness analysis (assign 2) • Decision/SWOT analysis (assign 3) NRAN 80113 Research in Nurse Anesthesia • Critical Appraisal Qualitative study (assign 1) • Critical Appraisal Quantitative study (assign 2) Current resume or CV of pre-doctoral program experience (upload on home page)	**Spring courses: May 15** **Summer courses: August 15** Revise documents as recommended by course faculty. Upload to the portfolio (Digication)
3 fall, on campus	NRAN 81243 Translational Research • Narrative review paper (assign 4) • Intervention, implement, evaluation discussion primary post (with title page, AMA format) • CITI certificate • AACN reflective self-evaluation	**December 31** Revise documents as recommended by course faculty. Upload to the portfolio
4 spring, on campus	• AANA Art Zwerling Conference module certificates x 5 • Any course works of student's choice	**April 30**
5 summer, on campus	• Any course works of student's choice	**July 31**
6 fall, clinical practicum I	NRAN 88080 Advanced Project Step 1: Problem identification	**November 1-15:** Participate in Advanced Project course D2L discussion

	• Identify and define clinical problem
	• Evidence appraisal table: search/analysis of the literature
	
	NRAN 80683 Clinical Residency I
	• Practicum I case log from Typhon
	
	NRAN 80672 Advanced Pathophysiology and Clinical Management I
	• 3 online course topic care plans (add a title page; upload to clinical coursework, clinical case reports, respective care plan topic)
	• Reflection paper (add a title page; upload to clinical coursework, reflective self-evaluations, clinical practicum I)
		board with peers. Meet with advisor to discuss problem and clinical case.
		November 15: Final topic decision due
		November 30: items due in Advanced Project course:
		
		   1. Initial evidence appraisal table
		   2. Practicum I case log
		
		November 30: upload practicum I case log in portfolio
		
		December 31: Upload the following items from the online course to the portfolio by due date:
		
		   1. 3 online course topic care plans
		   2. Reflection paper

7 spring, clinical practicum II	NRAN 88080 Advanced Project
	Step 2: Retrieval, review, and synthesis of existing evidence from the literature
	• Final evidence appraisal table
	
	Step 3 and Step 4: Develop a strategy to address the problem and plan for implementation
	• Poster
	• Scholarly project paper #1
	
	NRAN 80783 Clinical Residency II
	• Practicum II case log from Typhon
	• Advanced simulation reflective self-evaluation. Advanced Sim may be in practicum II, III, or IV.
	
	NRAN 80772 Advanced Pathophysiology and Clinical Management II
	• 3 online course topic care plans (add a title page; upload to clinical coursework, clinical case reports, respective care plan topic)
	• Reflection paper (add title page; upload to clinical coursework, reflective self-evaluations, clinical practicum II)
		January 15: final evidence appraisal table due in Advanced Projects course
		
		March 1: drafts due in Advanced Project course
		
		   1. Poster
		   2. Scholarly project paper 1
		
		April 1: final poster due in Advanced Project course
		
		April 15: final scholarly project paper 1 due in Advanced Project course
		
		April 30: practicum II case log due in Advanced Project course
		
		April 30: upload the following items to portfolio by due date:
		
		   1. Poster
		   2. Scholarly project paper 1
		   3. Practicum II case log
		   4. Advanced simulation reflective self-evaluation

		May 31: Upload the following items from the online course to the portfolio by due date: 1. 3 online course topic care plans 2. Reflection paper
8 summer, clinical practicum III	NRAN 88080 Advanced Project Step 5: Dissemination • Methods of dissemination: presenting the DNP-A poster to additional audiences at state or national association meetings; clinical education session; or submission for journal publication. Evidence of dissemination MUST be present. May be completed in practicum IV. • Scholarly project paper 2: Add intervention, implementation, and evaluation of DNP-A project to project paper 1. NRAN 80882 Clinical Residency III • 3 patient anesthesia care plans from the clinical setting • Practicum III case log from Typhon NRAN 81353 Health Care Policy and Politics • Health policy course project • Summary of professional meeting attendance (may be completed in semester 9, fall)	**July 31:** Items due in Advanced Project course: 1. Draft of scholarly project paper 2 2. 3 patient anesthesia plans from the clinical setting 3. Practicum III case log 4. Advanced simulation reflective self-evaluation (if done in practicum III) **July 31:** upload the following items to the portfolio by due date: 1. 3 patient anesthesia plans from the clinical setting 2. Practicum III case log 3. Advanced simulation reflective self-evaluation (if completed in practicum III) 4. Health policy course project 5. Summary of professional meeting attendance (if completed in practicum III)
9 fall, clinical practicum IV	NRAN 88080 Advanced Project Step 6: Final paper • Scholarly project paper 2: Add intervention, implementation, and evaluation of DNP-A project to project paper 1. Final portfolio documents: • Summative reflective self-evaluation • Final CV or resume • Any additional works of student's choice	**August 30:** final scholarly project paper 2 due in Advanced Project course. Upload to portfolio after making revisions recommended by advisor. **November 30:** items due in the Advanced Project course: 1. Summative reflective self-evaluation 2. Resume or CV 3. 3 patient anesthesia plans from the clinical setting

| | NRAN 80983 Clinical Residency IV
• 3 patient clinical anesthesia care plans from the clinical setting
• Practicum IV case log from Typhon | 4. Summary of professional meeting attendance if completed in practicum IV

November 30: upload the following documents to the portfolio by due date:

1. Summative reflective self-evaluation
2. Resume or CV
3. Any additional works of student's choice
4. 3 patient anesthesia plans from the clinical setting
5. Summary of professional meeting attendance if completed in practicum IV

First Friday in December: upload final case log from Typhon to Advanced Project course and the portfolio |

Section V
# Doctoral Presentation

Clinical Project Presentation

The DNP-A Clinical Project poster will be presented at the School of Nurse Anesthesia Research Symposium held in late April or early May each year. All students (local and distant) will be present for the Research Symposium. A poster on the scholarly project focused on clinical, educational, or professional anesthesia practice will be prepared and presented to the faculty and for peer review. Undertaking this project prepares the RRNA to incorporate clinical scholarship and analytical methods for evidence-based practice.[1]

The poster will represent the first scholarly project paper.

General instructions:
1. Use the official TCU poster template size 42" x 56".
   42" x 56" template

   Note: the template is software version 97-2003. When saving to computer, save in a newer format, **pptx.**
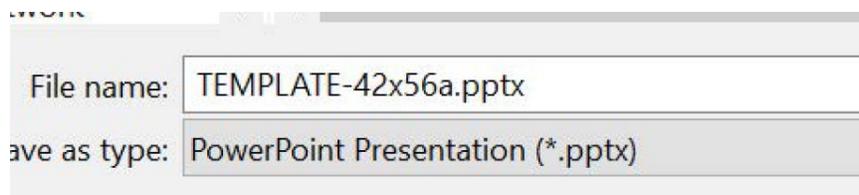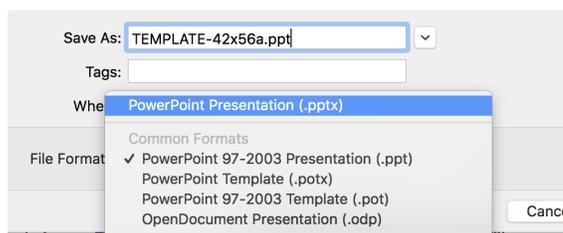
2. Visitors reading the poster should be able to scan and obtain all salient points within 5 minutes. Do NOT copy and paste information directly from a paper. The poster should be a condensed synopsis of the main aspects of a project.
3. The grading rubric for the posters are in the DNP-A Project Guide. Review the rubric for the scholarly project poster and ensure all points are addressed.

4. Follow AMA style to format the writing within the poster.[13] Include *reference citations on all* images, graphs, diagrams, etc. Use high quality images.
5. Acceptable references are peer-reviewed journal articles and no more than one textbook, preferably no textbooks. Figures from *quality* websites may be used in the poster.
6. Areas of focus or concentration include:
    a. Why did one select this topic and case?
    b. Provide a brief background of the issue or overview of the case
    c. Briefly state the search strategy used to retrieve relevant literature
    d. Provide a case presentation
    e. Discuss review of literature and synthesis
    f. Discuss recommendations for practice, conclusions, and recommendations for future research

Oral presentation of the poster:
1. The RRNA will present a poster including relevant findings, literature synthesis, and any recommendations for practice change to the faculty in a brief, 3-minute oral presentation to a team of 2-3 faculty members.
2. The 3-minute oral presentation will be conducted using the 3-minute thesis (3MT, University of Queensland) style of presenting research.

    General guidelines include:
    a. Write for the audience, explain concepts
    b. Convey excitement and enthusiasm for the subject
    c. Present the information as a story—how would you explain your work to a friend or family member who is unfamiliar with the topic area.
    d. Target a specific point that is important for audience members to know from the presentation.
    e. Practice, practice, practice.
    f. Video record yourself giving the presentation.
    g. Have someone watch you give the presentation and offer constructive criticism.

        i. For more detailed information, view the Three Minute Thesis (3MT) website, University of Queensland, Australia.[14]
        3 Min Thesis Founded by University of Queensland

        ii. Direct links to resources for preparing a 3MT presentation: 3MT competitor guide, see drafting and presentation.
        3MT Competitor Guide

        iii. In place of a single PowerPoint slide, RRNAs will present the DNP-A poster. Use the 3MT format to give the oral presentation to faculty.

    iv. Faculty recommend watching several 3MT videos on the website to learn the format for presenting information within a 3-minute timeframe.

    v. The faculty will elicit answers from the student during a 5-minute discussion after the oral presentation.

3. RRNAs will be evaluated on the ability to clearly articulate the poster topic, answering questions and project a confident, professional demeanor. See respective DNP-A poster rubrics on the following pages.

4. Faculty complete an evaluation via a rubric and provide formative feedback to the student. The student will make appropriate revisions based on feedback from faculty.   The final work will be disseminated to future audiences, as required for Step 5 (Dissemination).

- Students must pass this aspect of the scholarly project, or a grade of NC will be received. With faculty feedback, all students should expect to move forward after suggested modifications to the poster have taken place.

Dissemination after Research Symposium: (Step 5)

Disseminating findings from research projects to others in clinical practice can improve healthcare outcomes. To achieve this goal, all students are required to present their poster to educate others (Dissemination / Step 5).

The poster will be presented to additional audience(s) after appropriate revisions, if any, are completed (based on formative feedback post-symposium).

After successful completion of the Research Symposium experience, the students identify an appropriate mode of dissemination. Examples of dissemination include submission for publication, state or national presentation of poster, or clinical site education session. Approval of dissemination activity should be obtained from the advisor prior to dissemination. Evidence of dissemination must be present. Coordinate the poster presentation event selection with your advisor.

Provide evidence of poster presentation to additional audiences to the DNP-A scholarly project. Evidence can be in the form of photos, email/letter of acceptance to present at a professional meeting and certificate of attendance, attestation from clinical faculty of presenting an in-service, or evidence of submission to a journal of the RRNA's choosing.

Evaluation

POSTER PRESENTATION EVALUATION RUBRIC

Student name: **Score:**
Advisor: **Evaluator:**

	Point value	Points earned	Comments
Introduction/background **10 points**			
• Clearly introduced subject/topic	3		
• Background appropriately informs reader	4		
• Background supports project work and motivation for project	3		
Case description/patient care **15 points**			
• Appropriate history and physical	7		
• Clear, accurate description of perioperative course	8		
Discussion **20 points**			
• Key points of case stated	6		
• Clinical rationale described	7		
• Case critique, alternatives stated	7		
Conclusion/recommendations for practice **20 points**			
• Cites appropriate conclusions and any recommendations for similar scenarios	10		
• Recommendations possess clarity and based on supported clinical rationale	10		
Oral /affective component **25 points**			
• Articulates clearly, concisely	3		
• Answers questions completely, without hesitation	3		
• Confident, professional demeanor	3		
• Presentation reflects adequate preparation	8		
• Conveys in-depth mastery and knowledge of the topic	8		
Poster style and layout **10 points**			
• Easy to read, logical flow of information	2		
• Professional appearance	2		
• Effective use of graphics	2		
• Compliant with AMA format	2		
• No typographical errors	2		
Total	**100**		

Comments:

TCU School of Nurse Anesthesia DNP-A Program
POSTER PRESENTATION EVALUATION RUBRIC

The following is a general description of the poster presentation ratings. Grades of A or B are passing for the DNP-A poster presentation. Grades of C or F will require remediation at the discretion of the student's DNP-A committee.

A, 92-100: Exemplary poster and oral presentation with little or no need for improvement. All areas of evaluation meet or exceed specified criteria. Few, if any, very minor flaws or gaps in the work. The final product is outstanding. The student is articulate and eloquent in delivery of the oral presentation, demonstrates in-depth mastery of the topic and a professional demeanor.

B, 83-91: Appropriate, acceptable work but with areas that require more detail or completeness. All areas of evaluation meet specified criteria. Minor flaws or gaps exist in the work but the overall final product is acceptable. The student is articulate in delivery of the oral presentation, demonstrates mastery of the topic and a professional demeanor.

C, 74-82: Clear, obvious deficits exist in the work. Flaws and gaps in the work are easy to identify. The final product would be acceptable with changes and/or additions to identified areas of evaluation. The student lacks ability to easily articulate delivery of the oral presentation. He/she demonstrates poor understanding of the topic and/or lacks professional demeanor. Areas requiring revision should be rectified by the student and resubmitted to the student's DNP-A committee.

F, 73 or less: Clear, identifiable, and obvious deficits exist in the work. Gross flaws and gaps in the work are easily identifiable in most, if not all, areas of evaluation. The final product is unacceptable. The student is unable to deliver an articulate presentation, lacks understanding of the topic and/or displays unprofessional demeanor. Areas requiring revision must be rectified by the student and resubmitted to the student's DNP-A committee.

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