DEPAUL UNIVERSITY
CENTER FOR TEACHING AND LEARNING

SoTL Grant Proposal Form

To be considered for funding, your research proposal must align with the following definition of the Scholarship of Teaching and Learning, SoTL, endorsed by the University Faculty Council (January 2014):

"*The rigorous investigation of student learning, with the purpose of developing novel teaching methodologies and practices that can lead to the measurable enhancement of student learning. The results of the investigation are made public through quality scholarly outlets and widely-accepted conferences and general or discipline-specific journals.*"

I. Basic Information

Title of Project: Asynchronous Simulated Telehealth or Graduate Nursing Students in an Online Pharmacology for Advanced Practice Course_____

Date of Application: 9/18/2020_____

Investigator(s) Information

Principal Investigator:

Name: Donna Badowski_____
College: College of Science and Health_____
Department: School of Nursing_____
Phone Number: 630-945-7610_____
Email Address: dbadowsk@depaul.edu_____

Other Investigators (Co-Pi):

Name	College	Department
Christina Lattner	CSH	School of Nursing
Dorothy Otremba	CSH	School of Nursing

For each investigator, please include an abbreviated CV using the SoTL grant CV template.

Will your project involve human subjects? **X** Yes No ☐
If Yes, you must include evidence of IRB approval or exemption, or of having applied for IRB approval or exemption. Please note that before any granted funding can be made available, you will be required to provide evidence of IRB approval or exemption.

Requested Funds

Amount Requested (up to $2,500): __$2500.00_____

II. Project Abstract (250 words or less)

The COVID-19 pandemic lockdowns affected both the delivery method for higher education and healthcare. Higher education shifted from face-to-face learning to remote learning. Outpatient healthcare institutions shifted from in office visits to telehealth visits. Telehealth is now becoming a booming industry that will most likely be sustained post COVID-19. Many nursing programs do not provide telehealth learning experiences for their students. The use of simulation in nursing education provides an alternative to traditional clinical experiences. It mimics realistic clinical situations in which students can provide assessment and care, make clinical decisions, and observe the results in action. To respond to address the current explosion of telehealth and prepare future nurses for this type of clinical care, faculty in NSG 484 Pharmacology for Advanced Nursing Practice created an innovative simulated telehealth learning experience for graduate post-licensure nursing students. This proposal seeks funding to support a prospective study evaluating student perceptions of the learning experience and its sustainability as an innovative online pedagogical method of learning.

III. Project Description (1000 words or less)

Purpose of Project

Describe your research project.

1. Please provide a clear statement of the teaching-learning issue that you want to investigate, and explain briefly why this issue warrants a systematic and rigorous investigation.

   The COVID-19 pandemic caused a major shift in clinical learning experiences for nursing programs. The number of positive cases, increased hospitalizations, and deaths was growing exponentially in the beginning. Globally, governments began implementing lock down measures of its citizens in order to flatten the curve to prevent overwhelming the healthcare system. In response, colleges and universities had to immediately shift to remote learning (Dewart, Corcoran, Thirsk, & Petrovic, 2020; Leigh et al., 2020). Healthcare organizations closed access to nursing students clinical practice experiences. This led nursing programs to substitute virtual simulation for traditional clinical. Virtual simulation or computer-based simulation is a simulation-based learning activity designed to provide real-life experiences through the use of alternate medium. Learners complete certain tasks in a variety of potential environments, use information to provide assessment and care, make clinical decisions, and observe the results in action (INACSL Standards Committee, 2016a). Furthermore, primary healthcare organizations quickly shifted to telehealth to reduce patient contact experience save personal protective equipment yet allow for patients to obtain needed healthcare. Telehealth can be used to deliver healthcare and health education at a distance (HealthIT.gov, 2017) It allows advanced practice nurses and registered nurses to interact with patients at remote sites using technology to gather health status data, provide therapeutic interventions, and evaluate patient responses to nursing care (Schlachta-Fairchild, Elfrink, & Deickman, 2008).

   Three nurse faculty, with the assistance of our instructional designers, created an asynchronous telehealth simulated experience for graduate post-licensure nursing students enrolled in the online NSG 484 Pharmacology for Advanced Nursing Practice course. The innovative strategy is an asynchronous unfolding 2 part video-recorded interaction of a patient with a nurse provider. The simulation followed the *INACSL Standards for Best Practice: Simulation*^{SM} (INACSL, 2016b) which had students:

   - Complete the preparatory assignments in D2L
   - Read the prebrief in D2L

- View Part 1 telehealth recording in D2L
- Complete discussion board assignments in D2L (which then unlocks Part 2 video)
- View Part 2 recording in D2L
- Complete discussion board assignments in D2L
- Attend a synchronous debriefing at the end of the module via Zoom

This research project will examine student perceptions of this innovative asynchronous simulation-based telehealth experience. This innovative strategy warrants a systematic and rigorous investigation to determine the effectiveness of this innovation in meeting student learning outcomes and the sustainability of future asynchronous simulated telehealth learning experiences within the online graduate post-licensure programs.

2. State, in clear and measurable terms, a *Research Question* to indicate specifically what it is that you want to know as a result of this investigation.
    1. How did students perceive the effectiveness of the asynchronous simulation-based telehealth experience in meeting their learning needs?
    2. Did students perceive the asynchronous simulation-based telehealth experience as a valuable learning experience?

Theoretical Framework

Explain how your proposed research builds on or fits into existing relevant literature. Provide a brief but comprehensive bibliography as an appendix.

The global COVID-19 pandemic dramatically changed the adoption and utilization of telehealth. The U.S Department of Health and Human Services disclosed in a report that 43.5% of Medicare primary care visits were provided through telehealth services in April 2020 compared to 0.1% telehealth visits completed in February 2020 (USDHHS, 2020). Additionally, the FAIR Health tracking database on telehealth reported an 8,335.1% change from April 2019 to April 2020 in utilization of telehealth services with increases noted in both urban and rural settings (FAIR Health, 2020). While telehealth has expanded access to essential health care services, many educational programs do not formally include telehealth in their curriculum and health care workers often obtain training through their employers (Rutledge et al., 2017). The National Organization of Nurse Practitioner Faculties identifies the integration of appropriate technologies including telehealth as an essential core competency for advanced practitioners (NONPF, 2017). As telehealth is expanding, it is essential to prepare students to the changes of health care delivery. The American Association of Colleges of Nursing recommends the use of simulation to supplement clinical experiences (AACN, 2015).

Virtual simulations have emerged as a new form of simulation pedagogy during the global pandemic. The use of virtual simulations in advanced practice programs have not been well documented in literature (Merritt et al., 2017). Additionally, there is limited literature on the implementation of telehealth-based scenarios. Authors of recent publications have called for more research in virtual simulations as well as integration of telehealth experiences into nursing curriculum (Foronda et al., 2018; Smith et al., 2018). This research project will contribute in providing valuable information on implementing an asynchronous virtual telehealth simulation in an online Pharmacology for Advanced Nursing Practice course.

The NLN Jeffries Simulation Theory has seven constructs (Jeffries, Rodgers, & Adamson, 2016). These constructs include context, background, design, simulation experience, facilitator and educational

strategies, participant, and outcomes. This study will measure the outcomes construct, specifically focusing on the participant outcomes. According to Jeffries, participant outcomes include reaction, learning, and behavior change. This study will measure learner reaction and self-perceived knowledge to the innovative simulated telehealth experience.

Research Methodology

Describe the research design you have chosen to answer your research question, and briefly explain why it is appropriate for this project. Make sure to indicate the kind of data that will be collected, how it will be collected, and how it will be analyzed.

This is a retrospective cohort descriptive research design. We plan on collecting quantitative and qualitative data from approximately 20 post-licensure nursing students who completed NSG 484 Pharmacology for Advanced Nursing Practice in summer 2020 and for those who will complete it in winter quarter 2021. No personal identifying information will be collected. NSG 484 is 100% online instruction through D2L. As such, completion all data will be conducted online and completed on students' individual computers or other devices via DePaul Qualtrics. The survey will take approximately 15-20 minutes to complete. The study participants need to meet the following inclusion criteria:

- English-speaking
- Enrolled in any of the graduate post-licensure nursing programs at DePaul University
- Successfully completed NSG 484 in summer 2020 and successful completion in winter quarter 2021

The Simulation Evaluation Tool-Modified will be used to answer the first research question. It has been tested for validity and reliability and useful for evaluating the learner's perception of how effective the simulation was toward meeting their learning needs (Leighton, Ravert, Mudra, & Macintosh, 2018). The second research question will be answered with a modified version of the Evaluation of vSim tool (Foronda, et al. 2018). Descriptive statistics will be used to analyze data and qualitative data will be analyzed by identifying common themes. In addition, some demographic questions will be collected.

Impact of Project

Assuming successful completion of this project, please describe how the results of the proposed research could help in the development of teaching methodologies or practices aimed at improving student learning in measurable ways.

The completion of this project will further the development of teaching strategies in distance education related to simulated telehealth experiences for post licensure nursing students. We hope this research will inform instructors teaching in the DePaul University SOB on the value of integrating asynchronous simulated telehealth experiences nursing courses. We plan to share our results in an academic journal publication focused on nursing education and/or distance education to contribute to the greater nursing academic community.

Dissemination of Results

Describe how you plan to share the results of your project, within and/or outside of the DePaul community.

We plan to share our results with instructors in the School of Nursing at DePaul University and the greater DePaul University community. We also aim to publish our findings in a peer-reviewed journal targeting nursing education, simulation education, or distance education.

IV. Project Plan and Timeline

Describe the proposed project plan and timeline. *Please note grant funds need to be used by the end of the fiscal year.

Project Timeline	
Time/Quarter	**Task**
October 2020	• Obtain IRB approval (currently pending) • Search and hire Student research assistant (SRA) • SRA to enter demographic questions and instruments questions in Qualtrics©
November 2020	• Begin recruitment of participants • SRA to send initial recruitment email with survey link • SRA to send reminder recruitment email with survey link 2 weeks after initial recruitment email • Submit abstract to the International Nursing Association for Clinical Simulation and Learning Conference
March 2020	• Begin second phase of recruitment for students enrolled in winter quarter 2020 NSG 484 • SRA to send initial recruitment email with survey link • SRA to send reminder recruitment email with survey link 2 weeks after initial recruitment email
April 2020	• Begin data analysis • SRA to create data tables
May 2020	• Begin write-up of findings for dissemination
June 2020	• Attend INACSL conference

V. Budget

Provide a detailed, itemized budget of how proposed funds will be used. If applicable, provide information about any external funds you have secured for this project and/or matching funds from DePaul University (including in-kind contributions).

Item	Cost	Quantity	Total
Starbuck's eGift Card	$5.00	20	$100.00
One-day INACSL Conference Registration Fee	$300.00	4	$1200.00
Student Research Assistant 3 hours per week @ $14.00/hr X 16 weeks (inputting survey in Qualtics, sending recruitment emails, creating data tables, assisting write-up of manuscript)	$672.00	1	$672.00
Airfare to Denver, CO for conference travel (fees associated with hotel/airfare will be covered as out-of-pocket expenses) X3	$132.00	4	$528.00
Total			$2500.00

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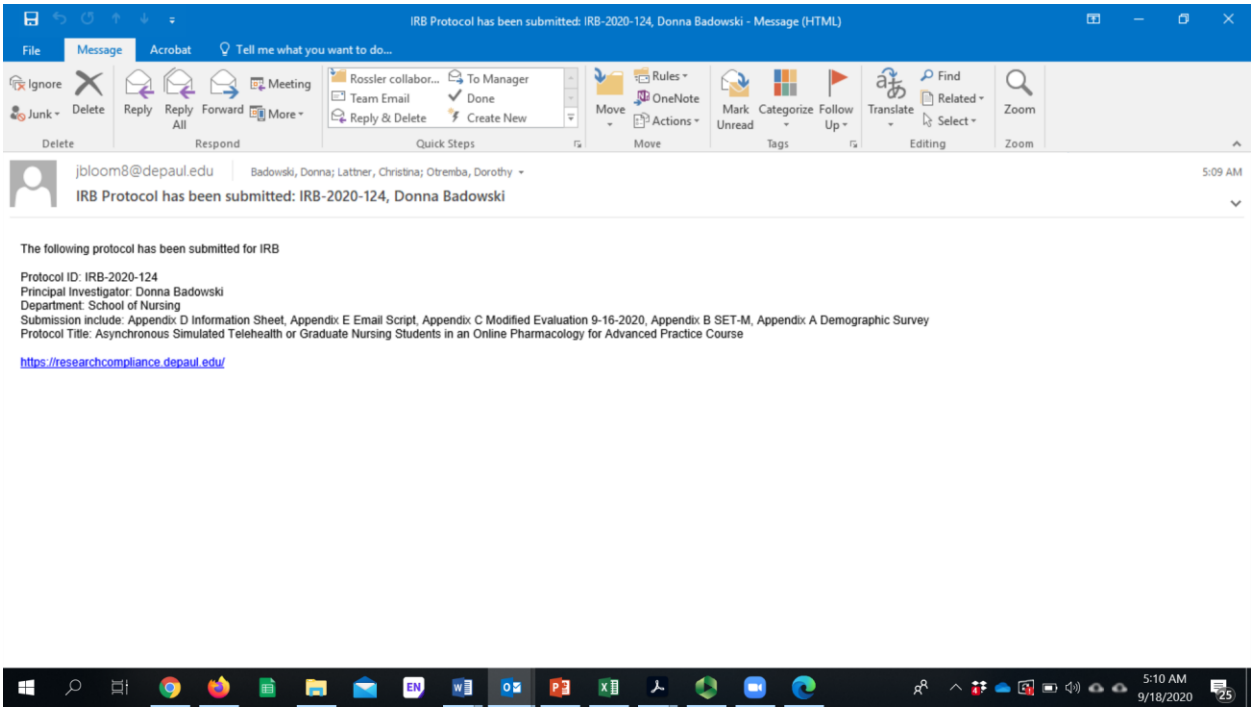
IRB Submission Verification