Perspective

Evaluating Post Master's DNP Programs through the Boyer Model Lens

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Abstract

The number of American Doctor of Nursing Practice (DNP) programs, according to American Association of Colleges of Nursing (AACN), has grown from 30 in 2006 to 264 in 2014 [1]. The DNP degree prepares nurses to provide patient care at the highest level of education and practice. Programs have two entry levels, the BSN prepared student and the Masters prepared student. The post master's DNP curricula increases the practitioner's knowledge and level of expertise in the areas of research, evidence based practice, information systems and technology, healthcare policy, collaboration, health promotion/disease prevention and advanced nursing practice for individuals, populations and systems [2].

The DNP heralds a paradigm shift in doctoral nursing education, focusing, on clinical nursing expertise for application of evidence-based practice (EBP) in an increasingly complex health system. This growing field of advanced practice nurses will face the changing landscape of healthcare, and be required to "create clinical strategies that improve practice and health outcomes" [3] (p.330).

Curriculum development for the DNP must incorporate didactic and practica learning focused on increasing the student's ability for critical thinking and reflective practice. The nurse moves from the provider of care for one individual to an expert who can apply evidence based practice (EBP) and nursing scholarship to populations and systems. A review of the literature revealed a gap in knowledge related to the evaluation of the impact of the DNP program on the graduate DNP's nursing practice. Redman, Pressler, Furspan and Potempa (2014) evaluated the number of articles that were authored or co-authored by DNP's as a reflection of scholarship with DNP nurses. Eleven thousand five hundred seventy five DNP students were enrolled in programs as of 2012, with 690 articles identified as being authored/co-authored by DNPs [4]. Half of the articles focused on practice, while the other articles examined issues of health care safety, education, and leadership [4]. Redman et al (2014) identified one method of analysis related to the contribution of the DNP on nursing scholarship. As more universities graduate the doctor of nursing practice scholar, the impact of the scholarship of practice of those graduates will highlight the importance of the degree and the far-reaching effects it will have on the future of nursing. In order to evaluate the comprehensive impact of the degree on DNP graduates, inclusive of the mission embedded in the DNP essentials, a methodology for evaluation of the process and the follow up achievements of the students is needed. This article provides a rubric for conducting both process and outcome evaluations of post master's DNP programs, based on the framework of the Boyer Model of scholarship.

The Boyer Model (1998) has been broadly applied to nursing, and is used as the definition of scholarship by the American Association of Colleges of Nursing [5,6]. The AACN has identified the scholarship of discovery to include empirical research, historical research, and development of theory, methodological studies and philosophical inquiry [6]. The scholarship of teaching/understanding, defined by AACN, includes discipline or specialty specific knowledge application in teaching and learning, innovation in teaching and evaluation, program development and role modeling in the profession. The scholarship of application, referred to as the scholarship of practice by the AACN identifies practice roles where clinical expertise is required and is demonstrated through the application of nursing into care delivery models, strategies, and evaluation of patient care outcomes. The AACN defines the scholarship of integration as looking at data in a larger way that connects ideas and illuminates it in new ways [6]. The AACN taskforce on defining standards for the scholarship of nursing provided this framework for the evaluation purpose of all nursing programs in institutions of higher learning [6,7]. This article will focus in only on the Post Master's DNP program, evaluating process and outcomes using the Boyer Model Lens.

INTRODUCTION

Curriculum development and the post master's DNP

The post-master's DNP curricula prepares the student who has already achieved a master's in nursing to meet all the end of program requirements established in the eight essentials of DNP education [1]. The AACN suggests that a post-master's DNP can be achieved in a minimum of 12 months of full time study [7]. This can be accomplished through well-planned educational scaffolding. Scaffolding is, in its most generic sense, the ability to provide a range of educational services that support learning [8]. Each subsequent course should build upon the knowledge learned in the previous course(s). As the DNP student moves through the program, the accumulation of knowledge and the application of that knowledge can be evaluated through process evaluations of the student's work in each course, culminating in the DNP project.

The Boyer model of scholarship and the post-master's DNP: The Boyer Model of Scholarship evaluates research through four lenses; discovery, integration, application, and teaching/understanding [5]. When applied to nursing, the Boyer Model "takes an expanded view of health by emphasizing

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health promotion, restoration and rehabilitation, as well as a commitment to caring and comfort" [7] (p.1). The evaluation of the impact of a post-master's doctor of nursing practice (DNP), using the framework of the Boyer Model of Scholarship, reflects the level of mastery in the four areas so important to the DNP - discovery, integration, application, and teaching/understanding

Purpose and value of assessing DNP outcomes: The distinction between the PhD and the DNP degrees can be clearly realized when using the Boyer Model. PhD programs focus on preparing nurses to conduct advanced research utilizing in-depth and often complicated methodologies, focused on generating new nursing knowledge. DNP program scholarship focuses on translating research into practice, with the intended results of improving outcomes in the arenas of patient care and population health. The institutions preparing the DNP student must be able to provide the clinical and academic environment that will produce a practice-focused, doctorally prepared expert. Outcomes quantifying graduate success from DNP programs can be achieved, using the framework from Boyer, demonstrating mastery in the DNP essentials.

EVALUATING SUCCESS OF DNP PROGRAMS THROUGH A BOYER LENS

Evidence of the impact of a DNP project as a practice focused scholarly work, consistent with the doctoral level of educational preparation, would be the best indicator of a DNP program's success. Identifying performance measures that can be observed and measured in process and outcome evaluations is imperative. The measures must be related to at least one of the varied subsets of healthcare as identified in the DNP essentials including, but are not limited to, improvement in patient health, clinical prevention and population health, Health care information systems and patient care technology, organizational and systems leadership and inter-professional collaboration for improvement in health outcomes [2].

Performance measures for each of the components of the Boyer Model, and clear measurable and reflect the practice

principal of the Doctor of Nursing Practice. Each measurable outcome should also reflect the academic rigor of achieving mastery in the field.

The development of the evaluation model presented in this paper identifies the four components of the Boyer Model, clear measurable performance measures, measures for process evaluation and final outcome/summative measures. As the number of DNP programs increase, the importance of identifying standard outcomes reflecting student expertise will also increase. A rubric that can be applied to the process of earning the DNP, as well as what the student achieves after becoming a Doctor of Nursing Practice, can help guide program evaluation. This rubric can also assist students evaluate and compare programs based in outcome measures and provide crucial information to institutions regarding the areas of strengths and weaknesses during their continuous internal program assessment.

Applying the boyer lens DNP rubric: Discovery, integration, application, and teaching/understanding

Each area of scholarship contains suggested performance measures, suggested process evaluation measures, and suggested outcome evaluation measures. This evaluation is not intended to provide an overall grade for the program. Its purpose is to reflect quantitative achievement of performance measures students demonstrate on the way to the DNP, as well as scholarly accomplishments reflective of the DNP essentials post-graduation. It is the opinion of these authors that, although the DNP is the terminal practice degree, it is just the beginning of the DNP graduate's scholarly application of nursing practice.

Discovery: According to Boyer, the scholarship of discovery is a contributor not only to advancing and generating knowledge but also to establishing a culture of inquiry on a college/university campus [5]. *Performance measures* for discovery in the post master's DNP would include publications, presentations, engaging in developing infrastructure for future research, identifying gaps in practice, exploring challenges, barriers, and opportunities in areas of nursing practice. The

Table 1: Rubric for process and summative evaluation on quantitative performance measure of post Master's DNP program success.

Boyer Component	Performance Measure	Process Evaluation	Summative Evaluation
Discovery	Dissemination through Publication, Presentation, Identify infrastructures and areas of need for future studies	Writing samples, discussion, Engagement in practica Use of EBP	# or % of DNP graduates publishing, presenting, continuing research up to 5 years post DNP
Integration	Inter/intra disciplinary collaboration Multidisciplinary education	Course based collaboration DNP inter/intra disciplinary project interdisciplinary DNP team	# or % of DNP projects engaging in collaboration outside of nursing.
Application	Consulting roles Leadership roles	Collaboration with faculty and key community leaders on specific projects/ teams Types of experiential projects/ learning	# or % of DNP graduates engaged in or moving into leadership and/ or Consulting roles.
Teaching/ Understanding	Patient/population teaching Continuous evidence based evaluation of effective teaching	Evaluation of impact of DNP project on key population Ongoing self evaluation for learning outcomes and during project review.	# or % of DNP engaged in expanding understanding of population health issues through DNP projects and practica

process evaluation for the discovery phase would include course writing, discussions, and engagement in conferences and clinical practica. The *summative evaluation* would reflect the number or percentage of graduates from the program who are publishing and/or presenting their DNP project outcomes upon graduation and up to five years post graduation.

Integration: Boyer identified the lens of scholarship of integration as "giving meaning to isolated facts", pulling together a larger picture to understand the fact in a greater, multi-disciplinary context [5] (p 18). *Performance measures* for the scholarship of integration in a DNP program would include evidence of inter and interdisciplinary collaboration and engagement in learning and educating outside the field of nursing. The *process evaluation* would reflect engagement in interdisciplinary learning, participating in projects that examine healthcare problems from multiple vantage points (pharmacy, politics, medicine, public health), and seeking to collaborate with others in different fields within nursing as well as those outside of the discipline of nursing. The inclusion of non- nursing team members in the DNP project would reflect the culmination of developing the scholarship of integration in a DNP program. The summative evaluation would indicate the number or percentage of DNP projects that engage in collaboration with multi-disciplinary teams interpreting and examining opportunities to provide information or solutions to a nursing problem, systems based issue or health care delivery need.

Application: The scholarship of application, according to Boyer, provides the link between academia and scholarly activities of service. "To be considered Scholarship, service activities must be tied directly to one's special field of knowledge, and relate to, and flow directly out of, this professional activity" [5] (p 22). The *performance measures* for the scholarship of application would include engagement in the act of consulting, and assuming leadership roles. The *process evaluation* measures would demonstrate evidence of engagement, during the DNP educational experience, of outreach towards faculty and key community members for collaboration, consultation and learning leadership roles. The *summative evaluation* would reflect the number or percentage of graduates from the program, who are actively engaged in, or moving into, leadership and consulting roles in healthcare.

Teaching/Understanding: According to Boyer, teaching/ understanding must emanate from a knowledgeable person, encourage active critical thinking that transforms knowledge, and extend it in new directions [5]. Nurses are educators, we educate the patients, the public, our colleagues in the healthcare field and we inform policies and laws. The *performance measures* for the scholarship of teaching/understanding would include

evidence of patient/population teaching, continuous evidence based evaluation of effective teaching for peers, colleagues and others, and engagement in critical thinking that expands the understanding of a nursing issue. The *process evaluation* of the scholarship of teaching/understanding would include evaluation of course-based teachable moments (didactic and clinical), the continuous evaluation of the impact of DNP projects on key populations, and evidence of ongoing self-evaluation during the DNP program as well as during the project review. The *summative evaluation* of the effectiveness of a program to cultivate the scholarship in teaching/understanding in the graduates would be reflected in the number or percentages of DNP graduates engaged in expanding understanding of population health issues through DNP projects, community/health education, education of interdisciplinary teams related to nursing and expanding the understanding of the role of nursing in the 21st century to leaders and policy makers.

DISCUSSION

Application of this model of evaluation can assist programs to determine if their objectives are being achieved both during and after the DNP student's matriculation in the program. It can also assist the student in determining the right program, using the rubric as an indicator of how many graduates continued to pursue the scholarship aspect of the DNP. Finally it can help nursing define the unique and important role of the Doctor of Nursing Practice in the educational experiences of nursing.

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