

Athletic training trends

ATSU perspective



PhD or DAT?

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A qualitative review of the emerging pathways and opportunities within athletic training education practice, education, and research. The purpose is documenting and communicating current and past trends within athletic training curriculum and terminal degree options within athletic training: a DAT or PhD.



When athletic trainers consider advancing their professional and education standing to the doctorate level, what comes to mind most often, historically, is a doctor of philosophy degree, a PhD. While there are similarities, there are distinct differences to note between a PhD and an advanced practice doctorate, such as the Doctor of Athletic Training (DAT) program at A.T. Still University's Arizona School of Health Sciences (ATSU-ASHS). Knowing the difference is an important part of the equation when it comes to finding the right path that matches academic and professional interests, goals, and objectives in the athletic training profession.

When contemplating a PhD or an advanced practice doctorate, such as the DAT, consider this:

PhD program: Prepares individuals to perform research to generate new knowledge.

Advanced practice doctoral program (DAT): Addresses real-world problems and enhances skills that can be applied in the workplace (practice).

Before determining what type of doctoral degree is a best fit, it is important to ask:

- Do I want to advance clinical applications?
- Do I want to do bench research in a lab?
- Do I want an athletic training-specific terminal degree with an emphasis on teaching the next generation of those in the field?
- Do I want to do clinically based research in the field?
- Do I want to become the expert athletic trainer at the point of care?

Doctoral education in athletic training

The PhD

The following provides a detailed framework of the PhD. This type of doctorate is applicable for those who wish to focus on doing bench/lab research or

conducting research in the field. Below is an excerpt from **PhD Education, The Nature and Purpose of a PhD Program**, the link for which is available on the National Athletic Trainers' Association (NATA) Education Overview page (Doctoral Programs section) on nata.org:

- The Doctor of Philosophy (PhD) degree is the highest academic degree granted by North American universities. It is a research degree and is to be distinguished from other doctorates such as the MD, JD, EdD, or DAT degrees, which are designed for professional training or which focus on applied rather than basic research.
- The PhD program is designed to prepare a student to become a scholar, that is, to discover, integrate, and apply knowledge, as well as communicate and disseminate it. The program emphasizes the development of the student's capacity to make significant original contributions to knowledge in a context of freedom of inquiry and expression. Such skills may lead to careers in social, governmental, business, and industrial organizations as well as in the university and college teaching, research, and administration.
- A well-prepared doctoral student will have developed the ability to understand and evaluate critically the literature of the field and to apply appropriate principles and procedures to the recognition, evaluation, interpretation, and understanding of issues and problems at the

frontiers of knowledge. The student will also have an appropriate awareness of and commitment to the ethical practices appropriate to the field. It is accomplished [through] apprenticeship to, and close association with, faculty members who are experienced in research and teaching.

- A central purpose of scholarship is the extension of knowledge, and students in a doctoral program become scholars by choosing an area in which to specialize and a professor with whom to work. Individualized programs of study may then be developed, and committee members selected cooperatively as course work is completed and research undertaken.
- When all courses have been taken, the research finished, the dissertation written, and all examinations passed, the student should have acquired the knowledge and skills expected of a scholar who has made an original contribution to the field and has attained the necessary expertise to continue to do so.¹

DAT or PhD?

Thought leadership perspective from ATSU-ASHS' athletic training program:

“The content required of future athletic training leaders is best taught in a non-PhD, advanced practice doctoral program, such as a doctor of athletic training degree. Advanced practice doctoral programs are different from traditional research-oriented doctoral programs in both the content and the educational experience, which is meant to be relevant to, and immediately applied to, the student’s professional work experience as an athletic training clinician, educator, and/or administrator. Unlike the PhD degree, the program does not intend to prepare a scholar with extensive expertise in theory and research skills. A DAT provides extensive flexibility not provided by traditional doctoral programs.”²

An in-depth study conducted by ATSU-ASHS' faculty thought leaders, in collaboration with other healthcare,

education, and research thought leaders throughout the country, has identified the knowledge gaps that existed and determined how they are now filled with an advanced practice doctorate specifically, the doctor of athletic training.

The PhD is the degree of the **professional scholar**; the advanced professional practice doctorate is the degree of the **scholarly professional**.³

Advanced practice doctorate: then and now

“While the athletic training profession has a robust system of doctoral preparation and research productivity, doctoral programs have, historically, been outside of the athletic training profession and produced scholarship that was less relevant to athletic training patient care than it needed to be to improve practice. Previous trends in athletic training clinical practice revealed the existing system of doctoral preparation to be inadequate for producing the clinical and field research methods necessary to produce clinical outcomes research and the highest levels of clinical evidence. The majority of doctoral-prepared athletic trainers, about 4 percent of all certified athletic trainers, have been trained in traditional lab- or bench-based methodologies that are common to the biomechanics or kinesiology disciplines. These skill sets do not transfer well to the field- and community-based methodologies that are necessary to produce clinically meaningful evidence. And, without these skills, emerging trends in clinical research, such as comparative effective research, will be difficult to leverage to the profession’s advantage, thereby threatening its ability to navigate the new healthcare environment.

“Consequently, the topical areas critical to future allied healthcare professionals, and especially to athletic trainers trained at the doctoral level, include:

- Expert clinical skills
- Advanced knowledge of evidence-based practice
- Healthcare policy and health reform
- Patient-oriented outcomes
- Economic and financial aspects of practice
- Quality improvement and patient safety
- Applied research skills
- Health information technology
- Advanced leadership, management, and personnel skills
- Healthcare delivery systems (insurance; organizational structure)
- Practice-based research

“In the past, athletic training professional educational competencies either have not covered these topics at all, or they covered them in a superficial way that does little to change practice and impact patient care. Moreover, adequate and meaningful coverage of these topics requires in-depth, prolonged study beyond what is typically available in a two-year master’s degree program. That is consistent with our personal observations after we taught some of this content in the current master’s degree program. In addition, to be truly appreciated, these topics require a more mature and experienced student who has the ability to appreciate and apply new concepts immediately to his or her professional experiences. ATSU-ASHS’ Doctor of Athletic Training program was developed to fill these knowledge gaps and prepare leaders in the athletic training profession.”⁴

Today, with the evolving nature of doctoral degrees such as ATSU-ASHS’ DAT, the importance of a doctoral education in athletic training cannot be understated as the athletic training profession continues to grow and evolve.

According to the Higher Learning Commission, “A convincing case can be made that the professional doctorate has a clearly defined place in the hierarchy of U.S. higher education. Particularly in the health care professions, there is an obvious need to create capacity to educate practitioners and those who will primarily be educating practitioners.”⁵

Doctoral education today, according to NATA:

“Doctoral education is important to the profession, especially for athletic training educators. NATA nor the Executive Committee for Education and its committees accredit or endorse specific doctoral education programs for athletic trainers.

“There are several opportunities for athletic trainers when embarking on a doctorate. While there are few universities that grant a doctorate in athletic training, there are several universities that provide research infrastructure, educational opportunities, mentorship, and financial compensation to athletic trainers.

“NATA provides contact information related to the doctoral educational opportunities for athletic trainers wishing to pursue a career in higher education (commonly referred to as ‘the academy’) (nata.org).

“Preparing for a career requires careful preparation to decide which program is right for you. Establishing clear goals for your scholarly research agenda is important as you investigate academic programs. There are several resources available as you investigate a doctoral education. Graduate education prepares the scientists and engineers needed by industry, government, and universities to conduct the nation’s research and development; educates the scholars in the humanities, social sciences and the arts who preserve and enlarge our understanding of human thought and the human condition; and develops the scholars in all disciplines who become the faculties of the nation’s colleges and universities. Several useful links to assist you in the pursuit of a career in academia are listed at the bottom of this page [[Education Overview page at nata.org](#)].”⁶

Advanced practice doctorate model

(from the American Association of Colleges of Nursing)

A model: the doctor of nursing practice

- Designed to prepare experts in specialized advanced nursing practice
- Focus on practice that is innovative and evidence-based, reflecting the application of credible research findings⁷

Intended outcomes include:

- Advanced competencies for increasingly complex clinical, faculty, and leadership roles;
- Enhanced knowledge to improve patient outcomes;
- Enhanced leadership skills;
- Advanced educational credential;
- Increased supply of faculty for clinical instruction⁸

Thought leadership and advancing the profession

Further study of the difference in doctoral degrees reveals developing trends that provide insight into the relevance of advanced practice doctorates and the distinct need for clinically-based scholars versus only research-based scholars.

Perspective from ATSU-ASHS:

“Responding to the call for a more practically based doctoral program for the professional, Lee, Green, and Brennen (2000) hypothesized working professionals were in need of a curriculum with doctoral rigor that addressed real-world problems in the workplace. Traditionally, the PhD curriculum prepared individuals to perform research to generate new knowledge. In large measure, this knowledge was quite specialized and historically confined to the silo of that individual’s subspecialty (Carnegie Project on the Education Doctorate, 2010).

“While this type of research did produce new

knowledge, it often did not address any specific real-world problem and usually remained in the realm of the academy rather than seeing application in the workplace. PhD programs have also been relied upon to produce new academic staff at universities. Recent research has documented many individuals who graduated with a PhD did not intend to enter academe (Costley and Lester, 2012). However, due to the specialization of the PhD program, many of these doctorally-prepared individuals did not have the skills needed to address issues of the modern workplace.

“Lee, Green, and Brennen (2000) cited the creation of the ‘advanced practice doctorate’ that allowed graduate students to combine academic theory and professional knowledge as it applied to the workplace. Figure 1 (modified from Lee et al., 2000) depicts the relationship of the three spheres describing theory, the workplace, and the profession. The intersecting area of overlapping interest represents the target area for the advanced practice doctorate.

“While still convinced the doctoral student needed a strong basis in academic theory, Lee, Green, and Brennen (2000) envisioned a doctoral practitioner who had less skill in pure research but who would be able to apply theory to address everyday problems in the workplace. This model did not devalue the

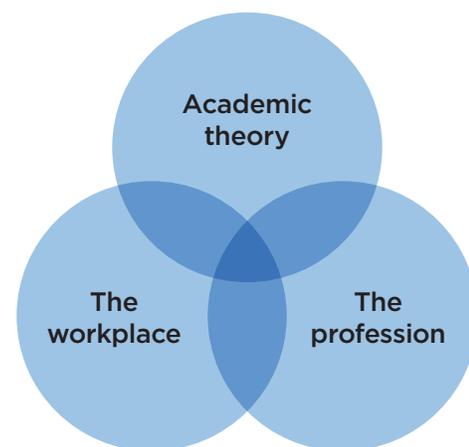


Figure 1. Theoretical framework of the intersection of theory and practice. Lee, Green, and Brennen (2000).

contributions of classical PhD training but rather suggested the creation of a hybrid doctoral curriculum preparing individuals to address a different set of problems via ‘applied research’ while adding value to the workplace (Taylor and Maxwell, 2004).

“Maxwell (2003) refined this concept, describing the advanced practice doctorate as ‘a vehicle which draws together the state of the art in professional practice, with relevant academic theory and applied to the solution of work-based problems; with a resulting change within the student’s own workplace.’

“Maxwell (2003) described an interdisciplinary program, given its requirements to address problems in the workplace, which by their nature are multifaceted and complex. He recognized the advanced practice doctorate as a vehicle drawing professional practice and relevant academic theory together to solve problems either in the workplace or in society. It was this concept that helped formulate the tenets of what a professional doctoral curriculum contained.”

ATSU’s DAT degree curriculum is based on the framework above and is a reflection of the evolution of the advanced practice doctorate.

“As the concept of the advanced practice doctorate gained acceptance, it matured from the original concept described by Taylor and Maxwell (2004), the so-called first generation, which was still quite similar to the PhD in structure. Today, the advanced practice doctorate concept has evolved to a second generation (Maxwell, 2003). The second-generation

doctorate is more focused on discipline and workplace realities (Maxwell and Kupczyk-Romanczuk, 2009).

“The health professions have seen startling growth in the number of second generation professional doctorates (Zusman, 2013). Some of the disciplines that have developed professional doctorates include audiology, nursing, physical therapy, athletic training, and occupational therapy as well as non-health related fields such as education and business. While there is divergence in the construct of the various programs, these types of professional doctorates share certain commonalities:

- They do not require original research (Zusman, 2013)
- They promote “mode 2 knowledge,” defined as knowledge in context of application (Taylor and Maxwell, 2004)
- They promote a tripartite collaboration (Taylor and Maxwell, 2004)
- They prepare stewards of practice (Kumar and Dawson, 2012)⁹

In conclusion

An advanced practice doctorate in athletic training creates new opportunities for athletic trainers to elevate their standing in the profession, ultimately expanding and enhancing the delivery of athletic healthcare.”

¹ NATA.org: Education Overview/Doctoral Programs

² Restructuring of the Residential Master’s Degree Program and Developing an Advanced Practice Doctor of Athletic Training (DAT) Degree Program (A.T. Still University’s Arizona School of Health Sciences): Eric L. Sauer, PhD, ATC, FNATA, Professor and Chair, Department of Interdisciplinary Health Sciences at ATSU and Associate Director of the Athletic Training Practice-based Research Network; Tamara Valovich McLeod, PhD, ATC, FNATA, Chair of Sports Medicine and Director, Athletic Training Program; John T. Parsons, PhD, ATC, AT, Former Director, Athletic Training Program

³ United Kingdom Council on Graduate Education. *Professional Doctorate Awards in the UK*. 2005

⁴ Higher Learning Commission. *Report of the Task Force on the Professional Doctorate*. 2006

⁵ NATA.org: Education Overview/Doctoral Programs

⁶ American Association of Colleges of Nursing. *The Essentials of Doctoral Education for Advanced Nursing Practice*. 2006

⁷ American Association of Colleges of Nursing. *Position Statement on the Practice Doctorate in Nursing*. 2004

⁸ An ATSU-ASHS doctorate program analysis; Albert Simon, DHSc, department chair of physician assistant studies; Danielle Kempton, DHSc, PA-C; Bob McMullen, DHSc, PA-C; Corey Cooper, manager of physician assistant studies at A.T. Still University’s Arizona School of Health Sciences. Nov. 21, 2017