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Commentary

The Academic Triathlete: Applying Triathlon Training Principles to Guide Academic Success

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ABSTRACT

Introduction: Academic faculty are evaluated on their service, teaching, and research performance with the reward of tenure, promotion, and self-fulfillment. Triathletes spend numerous hours building their swim, bike, and run endurance in aspiration of crossing the finish line on race day. Given the workload required for academic and triathlon success, effective time and task management is essential. In this commentary, the authors posit that academic faculty can effectively structure their day-to-day “training” to achieve their career ambitions similarly to how a triathlete structures their training plan in preparation for a race.

Perspective: Triathlon requires mastery of three disciplines - swimming, biking, and running - each of which requires specific training approaches, skills, and techniques. Likewise, the service, teaching, and research pillars of academia involve planning, development, and application of diverse knowledge, skills, and techniques. The authors apply the fundamental aspects and lessons learned of triathlon training to the planning and execution of faculty academic work.

Implications: Through the adaptation of a triathlete training framework to an academic position, the reader will be prepared to cross the finish line and realize their career goals as an academic triathlete.

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Introduction

Can you recall that feeling of anticipation and the extremes of emotions – joy, fear, anticipation, exhaustion – washing over your body? It may have been the first time you stepped into your class, the submission of your first grant application as principal investigator, or your persistent efforts in revising a now accepted manuscript. The reward is the euphoria and sense of accomplishment that comes from delivering an amazing lesson, receiving grant approval, or manuscript acceptance. As an academic constantly striving for success, this journey is an everyday reality. This compilation of determination, emotion, and satisfaction are analogous experiences that triathletes feel in the countless training hours leading up to, and culminating in, a race.

The parallels between the service-teaching-research of academia and the swim-bike-run of triathlon are remarkable. You may be a beginner triathlete looking to “just finish” a race or you may be a veteran academic applying for tenure. Ultimately, we are united by the same mission, the pursuit of a single end goal. In this commentary, we propose that academic career success can be elevated by applying the same training principles of triathlon.

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Perspective

At its most basic element, a triathlon training plan is a goal-oriented, systematic time and task management program. It is informed by your current fitness and skills, executed with a detailed plan, and adapted based on performance feedback. Similar to advancement through an academic career, it is challenging and individualized. Each triathlon has a specific distance and cut-off time associated with its title.¹ Each triathlon race, regardless of distance, consists of the same three disciplines: swimming, biking, and running. Similarly, academic promotion consistently involves evaluation of the same three pillars, service, teaching, and research, with scaled requirements and variation between institutions.

Although the summative goal of a triathlon and an academic career could be defined as the completion of a race and achievement of tenured full professorship, respectively, it is up to you as the individual to define what success means to you and to set specific, personal goals to guide you on your journey. Both triathletes and academics will appreciate that the hardest, and often most satisfying work, is in the preparation, rather than the destination.

Set Goals, Self-Assess, and Draft a Plan

Success in both academia and triathlon require intentional goal setting with ongoing evaluation and adaptation. Start with a defined overarching goal. In academia it may be an exceptional score on an annual evaluation, or in triathlon, the completion of a sprint triathlon race. Without a clearly defined goal it is nearly impossible to effectively structure your daily disciplinary activities to achieve success. Are you aware of the criteria and expectations required for promotion at your institution? Do you know the distance of each leg of your chosen triathlon race? Having a precise understanding of your desired endpoint allows you to laser focus on your target. Write it on the wall, put it in your digital calendar, and celebrate in setting your new goal.

Setting a specific goal should provoke a reflective process with the fundamental questions asking “where am I now,” “how did I get here,” “how do I feel about where I am,” and “where do I want to be?” This reflection will inherently assist you to identify your strengths and weaknesses that you can leverage and build upon. You likely have a passion for at least one discipline, but to achieve your ultimate goal you must also recognize the importance of focusing energy on the other disciplines. Thus, self-awareness of your performance in the different disciplines is crucial. Are you an effective teacher but need to work on your writing skills? Are you a strong cyclist but need to improve your running? Continuous self-assessment of your service, teaching, and research responsibilities, without objective parameters or external input, can be challenging. Self-assessment tools and metrics will be further described in each of the individual disciplines and may be found in [Fig. 1](#).

Once you have your defined goals (e.g., swim 1.2 miles in 40 min, bike 56 miles in 3 hours, and run 13.1 miles in 120 min) and targeted areas for improvement, it is time to detail the specifics of your training plan. Break down your training plan into monthly blocks of work or milestones. Consider the specific outputs required to achieve a goal such as letters of support for a grant application, scheduling a peer teaching evaluation, or the completion of a data analysis. Assess if some tasks can be delegated within your team. To create an actionable plan, detail your schedule into weekly segments, then break it down further to an outline of daily activities based on your estimated time requirements. [Fig. 2](#) provides an example week of an Ironman 70.3 training plan, and [Fig. 3](#) shows how this could be translated to an academic training plan. When creating your own training schedule, structure it in proportion to your needs and goals.

Service and Swimming

Academic service can take many forms, ranging from committee involvement to the provision of professional activities such as clinical pharmacy practice. Service responsibilities can quickly fill your calendar and leave limited time for other faculty requirements. For many triathletes, especially beginners, improving swim performance is a common ambition that can easily overload the training plan without having defined goals. Spending countless hours swimming laps to improve endurance cannot be the only focus. Dedicated effort to improve other swim aspects, such as proper swim stroke, will pay larger dividends in the long run by improving speed with less exertion. Similarly, as a clinician it is easy to get swept up in a busy clinical practice area and spend time “swimming laps” for minimal academic gain. It can be challenging to limit time spent in clinical activities, especially if you love your clinical pharmacy practice, but as an academic it is crucial to ensure your service commitments leave you adequate time and energy to successfully complete the other disciplines of your academic position. When it comes to other academic service, you may not always have the choice to say “yes” and you may be mandated to serve on a committee or task force. The foremost responsibility in these circumstances is to be mindful of spending a disproportionate amount of time attending to these obligations.

Efficiency in your service portfolio may be addressed by using a “block” model to protect clinical or service time and by leveraging learners to support practice roles.² In today's academic world, success is often a team endeavor, and as a faculty member, especially those recently joining the academic ranks, it is wise to be methodological, proactive, and intentional in establishing or transferring your committee involvement, clinical practice site, and collaborators to meet your goals wherever possible. Additionally, we recommend regular reflection and review of service involvements to track your progress, to inform your continued professional development, and to ensure alignment with standards for promotion. Metrics for self-assessment of service portfolios and strategies to address identified areas for improvement can be found in [Fig. 1](#).

<p>Swim</p> <ul style="list-style-type: none"> Initial triathlon leg Most technical of the disciplines For the majority of athletes swimming requires the most skill development Often starts with all athletes in the water at the same time (mass start race) <p>Metrics: distance, speed, swim stroke, body position, kick technique, sighting (open water).</p>	<p>Bike</p> <ul style="list-style-type: none"> Second triathlon leg Largest component of a triathlon in both distance and time Requires focused training to optimize power output and pacing Every course is unique, course review is beneficial to plan race strategy and training <p>Metrics: Distance, speed, cadence, power (watts), heart rate, rate of perceived exertion, aerodynamics.</p>	<p>Run</p> <ul style="list-style-type: none"> Last leg of a triathlon Often viewed as the most mentally taxing triathlon leg Requires practice running on fatigued legs after a long bike ride Run course review is pivotal to creating training plan and race day strategy <p>Metrics: distance, speed, cadence, ground contact time, stride length, torso form, leg motion, heart rate, rate of perceived exertion.</p>	<p>Overarching athlete needs</p> <ul style="list-style-type: none"> Nutrition plan (i.e. carbohydrate intake) Sweat rate (i.e. required water intake) Sodium intake (i.e. salt supplements) Hydration Equipment Strength and conditioning training Knowledge of the sport Race experience
<p>Service</p> <ul style="list-style-type: none"> University/college committee work Professional patient care activities Editorial board contributions Community based work (e.g., outreach events) Mentoring and coaching Administrative tasks (e.g., email) <p>Metrics: Specific outputs (e.g., assessment committee, number of exams reviewed, number of submitted manuscripts reviewed, trainee advancement) and common in-situ activities (e.g., meeting efficiency).</p>	<p>Teaching</p> <ul style="list-style-type: none"> Undergraduate and graduate students Allied healthcare professional teaching Patient/public teaching activities Critical component to academic success Institutions may have unique requirements <p>Metrics: student evaluation, peer evaluation, institution specific teaching evaluations, international association of medical science educator's evaluator assessment guide, student testimonials, pedagogy and learning theory, long term follow up of student performance (e.g., summative exams, national licensing, care delivery), and self-evaluation.</p>	<p>Research</p> <ul style="list-style-type: none"> Often the most important component for academic promotion Research idea generation to manuscript publication Grant funding <p>Metrics: Manuscripts published, obtained research funding, Helen Sword's BASE profile, writing time, "failure CV."</p>	<p>Overarching faculty needs</p> <ul style="list-style-type: none"> Continued professional development Self-care activities Knowledge of approaches to academic roles Academic experience
<p>Swim & service parallels/strategies</p> <ul style="list-style-type: none"> Shortest component of triathlon, smallest component of promotion standards 	<p>Bike & teaching parallels/strategies</p> <ul style="list-style-type: none"> Huge time commitment Regular formative feedback is critical to improvement and long-term success (biking feedback from a bike computer, and peer and student evaluations in teaching) Invest time in developing base endurance / faculty development (e.g., pedagogical theory) Get comfortable in aerodynamic position (e.g., bike fitting)/classroom management Manage effort on difficult sections (e.g., hills, students with advanced needs) to avoid setbacks throughout the rest of the "race" Critically review previous race/teaching experiences Evaluate impact of changing your training regimen/ teaching Celebrate good training days/teaching 	<p>Run & research parallels/strategies</p> <ul style="list-style-type: none"> Arguably the most important components of racing and academic work Require determination, creativity, adaptability, and persistence Often many cycles of trial and error to find the strategy and techniques that work best for the individual Require a balance of external motivation and interaction (fans in triathlon, research team in academia) and internal motivation (grit and resilience in both) Complementary focused research programme and run design (slow steady runs, high intensity, hill runs) Require patience and persistence to avoid burnout 	<p>Overarching parallels/strategies</p> <ul style="list-style-type: none"> Multiple competing tasks Organization and structuring of time/tasks are essential to success Beneficial to spend time in critical reflection, evaluation, and adaptation of plan Developing transferrable skills between disciplines is necessary for success Specific equipment, mindset, and techniques required Mental health supports Training plan (balanced with family and work responsibilities) Train with your plan, stick to your plan during race day

BASE = behavioral, artisanal, social, and emotional habits; CV = curriculum vitae.

Fig. 1. Comparison of academic and triathlon key disciplines, assessment metrics, and strategies for improving each.

Teaching and Biking

The bike phase of a triathlon is the largest, both in time and distance. Akin to biking, the responsibilities to your undergraduate and graduate trainees may account for a considerable amount of your academic time and effort. Creating a training plan for biking and teaching both require deliberate and thoughtful planning focused around the race course profile or promotion requirements. Unquestionably, your race training will look different depending on the context and location of the race. A hilly course with steep elevation gains will require different training than a flat course. Triathletes should spend time learning about biking techniques and strategies to approach biking in different locations, types of weather, and even how to repair a flat tire or other mechanical issues that could occur during a race. Likewise, academic faculty, who often do not have formal training in the provision of higher education, should invest time to learn about teaching techniques and pedagogy. For example, familiarity with when to use participatory learning, how to break down complex cognitive tasks, and how to provide meaningful, timely feedback will help you to approach didactic, laboratory, and experiential learning. The understanding of how you work in a given environment and how the environment affects you will only offer you further advantages on race day.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total Time (aerobic 80%:speed 20%)
Swim		Long low-intensity swim 2100 m end with 300 m swim technique drills (~1 h)		Swim with intervals 1200 m end with 300 m swim technique drills (~0.5 h)			Rest and stretch	1.5 h
Bike	Bike intervals 1 h		Aerobic bike 1 h		Long aerobic bike 3 h			5 h (4:1)
Run	Run aerobic 0.5 h		Intervals run 1 h		Very light effort run 0.25 h	Long aerobic run 2 h		3.75 h (2.75 h: 1 h) 73%:27%
Brick training	Bike-Run		+/- Run-Bike		Bike-Run			(Time commitment as accounted for in bike and run sections)
Cross training		Strength workout (0.5 h)				Core stability (0.5 h)		1 h
								Grand total = 11.25 h

m = meters.

^a Plans are subject to change based on competing family, work, and personal needs.

^b Plan is for goal times of 45 min swim, 3-hour bike, and 2-hour run.

Fig. 2. Example triathlon training plan^a for an Ironman 70.3 Race (week 15 of a 20-week training plan).^b

A plethora of performance parameters can be used to inform your biking and teaching efforts and are listed in Fig. 1. Many of the metrics in cycling, which can be continuously captured using a bike computer, are readily available for evaluation and incorporation into a training plan that can lead to impactful athlete behavior change. As educators, these continuous feedback measures may be more difficult to come by and require advanced planning. Ongoing, real-time, formative feedback is vital to achieving your goals. Some metrics can be easily obtained such as administration of a five-question survey to your class or asking a peer to review your lecture. Other feedback strategies may require more methodical reflection such as reviewing the best available evidence on teaching techniques or taking a course on learning theory.³ Experiment with strategies to evaluate your teaching efforts and utilize this information to adapt your teaching training plan.

Running and Research

You've made it to the last part of your triathlon and academic journey. Well done! You've racked your bike, swapped shoes, your legs are tired from the previous work, and now it is time to pound the pavement. In professional triathlon races, this is where it is either won or lost. For academics, this is often the primary focus for promotion – your research portfolio. Your schedule is likely full of your service and teaching duties and you may have little energy left. A combination of varied training methods with an appropriate intensity to build stamina and strength is vital to the success of this concluding discipline.

A well-designed running training plan should include several types of training methods, including aerobic work, tempo runs, hill repeats, and high intensity intervals. Employing too many run methods, or solely using a single method, impedes improvement, jeopardizing an athlete's goal. You may eventually find that your research repertoire has expanded, either opportunistically or planned, beyond an ideal scope. It may be prudent to focus on a few select projects or methodologies of highest priority and benefit. Alternatively, you may find that your research program is too focused and that addressing the limitation of a single approach will improve outcomes. It is important to recognize that these different training methods have a direct relationship with training time and intensity.

Training for any distance typically involves 80% of your time as aerobic, low-intensity, work to build endurance and 20% as speed, high-intensity, work to foster strength (Fig. 2). If you start with too much volume or at too high intensity, you risk injury and serious setbacks. Thus, as a triathlete it is critical to determine your honest baseline fitness level to inform your training plan. Parallels can be drawn between endurance and preparatory research tasks and between high-intensity work and writing. Preparation time may be spent on brainstorming hypothesis, immersing yourself in the literature, grant writing, or data analysis. These aspects are required to be adequately prepared for manuscript writing. However, both are required to improve and achieve your research goals.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total Time (Preparation/admin work:output work)
Service	Committee meeting (1 h)	Service day on site (5 h)	Committee work and email (1 h)	Service day on site (5 h)	Committee work and email (1 h)	Rest, brain recovery, and stretching		13 h (3 h:10 h)
Teaching	Teaching prep and course coordination (3 h) Teaching (1 h)	Teaching prep and course coordination (2 h)	Teaching prep and course coordination (1 h) Teaching (1 h)	Teaching prep and course coordination (3 h)	Teaching prep and course coordination (3 h) Teaching (2 h)			20 h (12 h prep:4 h classroom)
Research	Research prep (3 h) Manuscript writing (0.5 h)	Manuscript writing (0.5 h)	Research prep (4 h) Manuscript writing (1 h)	Manuscript writing (0.5 h)	Research Prep (2 h) Manuscript writing (0.5 h)			12 h 9 h research prep (reading/grant/data):3 h manuscript writing
Brick Training	Student research project (design #1)		Collaborative pharmacy faculty assessment related research project (design #2)		Clinical practice site research project (design #3)			(time commitments accounted for in research section)
Cross training		CPD (0.5 h)		CPD (0.5 h)				1 h CPD
								Grand total = ~45 h

CPD = continuous professional development.

^a Plans are subject to change based on competing family, work, and personal needs.

^b Plan based on performance evaluation of service 15%, teaching 60%, and research 25%.

Fig. 3. Example academic training plan^a for a tenure-track assistant professor (year 2 of appointment).^b

Connecting the Disciplines in Training

A well-prepared triathlete practices putting two or three of these disciplines together into a single workout called a “brick” training session to simulate race day. As an academic, identification of opportunities to connect the different disciplines of your work may significantly improve your efficiency. Trying out a new technique in the classroom? Engage in the scholarship of teaching and learning.⁴ Looking at ways to develop efficiencies with your service portfolio? Research how your outputs and metrics change over time. By dedicating time to these combined disciplines, we are able to truly set ourselves up for success on promotion day. When combining different activities, the performance metrics remain specific to each discipline. See Fig. 3 for example “brick” academic activities.

Bad Days, Support, and Inspiration

You have submitted that manuscript for the second revision and now it surprisingly gets rejected a third time despite all your hard work. In the classroom, you tried a new teaching technique and it failed... miserably. You had everything ready for the perfect training bike ride and you got a flat tire within the first three miles of heading out the door. You may get eight min into your run and think “I have zero desire to take that next step” and with the next step turn around and head home.

Bad days will happen. They may feel overwhelming and utterly demoralizing at worst. Overcoming these challenges and developing your mental grit and resilience are key skills for successful academics and triathletes to master. Anticipating, visualizing, and preparing for “bad days” can help minimize the loss of too much momentum or suffering undue stress. Practice changing a tire by yourself in the rain or take a local bike maintenance course from your local bike shop to learn how to deal with typical mechanical failures on a ride. Surround yourself with like-minded academic triathletes with similar goals to keep each other inspired either offline (e.g., writing groups, regular coffee brainstorming sessions) or online (e.g., Twitter, forums such as SlowTwitch). Some triathletes find significant benefit from hiring a triathlon coach to provide continuous feedback and support. Similarly, as an academic you could establish formal or informal mentorships with trusted peers as a means to gather ongoing feedback.⁵ At times you may need to take a break. You may need time for sore muscles to heal. You may need to reach out to co-authors or research collaborators to carry on while you take a short step back. Bad days should be seen as an opportunity for reflection and growth. The key to moving passed this challenging time is to keep a finger on the pulse of what motivates you and draw from that inspiration...frequently.

Implications

The Finish Line

This is it. You have arrived at “race day.” You have spent months preparing your fitness, refining your scholarly efforts, and overcoming countless challenges. You grew as an academic and a triathlete. You learned to work more efficiently and creatively and to train smarter, not harder. You pushed the limits of your mental capacity. You are strong. You are creative. You are ready, waiting for the starting gun to sound or ready to hit submit on your promotion package. Regardless of the scenario, the hardest work is already in the bank, and it is now time to put it all out there.

Before you know it, you can see the finish line. The fans create a thundering applause as you make your way down the finishers chute. You cross the line, accept your medal, and spend a few moments overwhelmed with emotions. As an academic, you are met with a smile and congratulatory handshake as your dean informs you that you have exceeded the standards for promotion. Once again, those familiar emotions overwhelm you – joy, exhilaration, exhaustion. Later, as you are reliving your experience with your loved ones, mentors, and colleagues, you let it slip that you are looking forward to the next “race day.” They ask “... but why?” “Why? Hmm...,” you reflect. That is when it hits you. It is because that is who you are – an academic triathlete.

Disclosure(s)

Both authors of this paper are hospital pharmacists by training and have spent the last five years (DR) and two years (KH) in academic pharmacy roles. For both authors, their academic roles are divided into service-teaching-research. Service involves work in both hospital and ambulatory care pharmacy settings, teaching relates to the instruction of undergraduate and graduate level pharmacy and medical learners as well as education of other healthcare professionals and the general public, and research involves pharmacy practice and education-based research. Both authors also have various administrative commitments including serving on college and university committees, coordinating courses, and contributing to professional organizations. Both DR and KH have completed multiple triathlon races ranging from Sprint Distance to Ironman 70.3 races. DR has recently been promoted from lecturer to assistant professor. Neither have yet achieved tenure, full professorship, or completed a full Ironman 140.6. When reflecting on their academic and athletic endeavors they have discovered many parallels between academic life and triathlon life.

Declaration of Competing Interest

None.

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