

# Professionalization of Exercise Physiology<sup>online</sup>

ISSN 1099-5862

April 2012 Vol 15 No 4

## **ABC of Professionalism and Vision**

Tommy Boone, PhD, MPH, MAM, MBA  
Professor, Department of Exercise Physiology  
The College of St. Scholastica  
Duluth, MN 55811

### **Introduction**

Professionalism has a range of meaning, from a description of fitness instructors with an emphasis on personal training, to ASEP's descriptions of what is exercise physiology and who is an exercise physiologist. The sports medicine and exercise science descriptions of professionalism are very different from the 21st century ASEP perspective.

There are hundreds of college and university students across the United States majoring in exercise science. The number is even several times that majoring in related academic degrees such as kinesiology, sports science, human performance, and so forth. Many, if not, most of these students graduate to find themselves without a career with financial stability and, therefore, they quickly complete the application to physical therapy or nursing.

*Indifference in questions of  
importance is no amiable quality.*

*-- Samuel Johnson  
(1709-1784)*

Yet, regardless of the decades of failed rhetoric regarding credible career opportunities, students continue to major in exercise science. If asked why, more often than not, they share their interests in sports and athletics. In short, their primary interest is athletics and not academics. They want to associate with people interested in athletics, sports, strength, and conditioning.

Students are interested in their appearance. Perhaps, they were part of athletics in high school and it helped them to feel good about themselves. Whatever the reason, physical

competition is important while cerebral competition isn't valued as highly, especially test taking. Many students present initially with little motivation to learn, and some are not interested at all.

The failure to think critically and reflectively about why they are in college and what they actually will do with the degree after college is high, which begs the question: "What is the main reason for spending 1000s of dollars on college tuition?" Is it to get an education for a specific career so that the graduates can financially make it? Or, is it all about sports? If it is the latter, then, it is obvious that many college graduates will (and do) find themselves asking themselves after college, "What was I thinking?"

### **Failure to Think Straight**

Basic treatment for failing to think straight is to "start today." But, that is easier said than done (given the inclination, if not, threat to not rock the boat). Clearly, majoring in exercise science as if it is the same as exercise physiology and as if exercise science is a profession is as silly as trying to adapt a helix to a straight line! Exercise science is one-step from the traditional physical education curriculum. The evidence of effectiveness is limited to sports and fitness, not to a comprehensive healthcare assessment as is true for the profession of exercise physiology.

*The world has no room for cowards. We must all be ready somehow to toil, to suffer, to die. And yours is not the less noble because no drum beats before you when you go out into your daily battlefields, and no crowds shout about your coming when you return from your daily victory or defeat.*

*-- Robert Louis Stevenson  
(1850-1894)*

The side effects of failing to think right produce variable degrees of feeling worthless (such as having wasted time and money). Many students often find themselves thinking negative thoughts about the academic institution, department, and the faculty. It doesn't have to be that way. Virtually all available information regarding college majors argues for sound counseling and credible information. Neither is happening or at least not on a regular basis. As a result, many students find themselves majoring in a variable mix of 40+ undergraduate degree programs.

The existence of these academic majors is directly a function of the failure of exercise physiologists in the late 1960s to think of themselves beyond publishing research papers. Even today, the emphasis on research is why many academic exercise physiologists exist. Publishing research papers is their ticket to academic promotion, tenure, and recognition. After all, as the saying goes, “anyone can teach” and, unfortunately, there are college teachers who are not interested in teaching and who are not good teachers. They are not even interested in correcting the problems of the past [1].

*Man is what he believes*

-- Anton Chekhov  
(1860-1904)

As a result, there are dozens of college degrees and academic courses that are simply useless to the students. Exercise science is one of many such degree programs. It is typically a degree within the School of Health, Physical Education, and Recreation. It is not a credible career-oriented degree. That is why the following content is commonplace on the School or Department’s website:

“The exercise science major provides an excellent preparation for graduate work in adapted physical education, ergonomics, biomechanics, exercise physiology, motor control, sport psychology, and sports medicine. In addition, students with this major prepare for admission to graduate programs in physical and occupational therapy, medicine, physician assistant, dentistry, podiatry, optometry, chiropractic, osteopathy, and other allied health fields.”

Can it be any clearer than the posted content? “Preparation for graduate work” is not preparation for a career. This means simply that the exercise science degree is a meaningless degree if students are interested in graduating and locating a credible job in the public sector. It is not a degree that sets the stage for a college graduate’s intention to get married, buy a home, cars, insurance, and all that is necessary to raise a family.

An ethical alternative to this dysfunctional outcome of failure to correct past mistakes that has resulted in nausea, headache, and overdoses of failed rhetoric can make a difference in the students’ future across the United States. That alternative is exclusively professionalism-based degree programs. But, it is effective only if the academic exercise physiologists stop deluding themselves. Their work is to teach as well as to do research.

Put another way, if the academic exercise physiologists are not working to support and build the profession of exercise physiology as physical therapists and dietitians are doing for their respective professions, you have ask the question: “What is it that they do not get?” Failing to understand the importance and necessity of supporting the profession of exercise physiology is no doubt a function of the doctorate faculty who fail to teach doctorate students the significance of professionalism, professional development, and concepts that undergird a profession.

### **Characteristics of a Professional**

College professors are the winner because their classes continue to be filled with students. They get paid, promoted, tenured, and life goes on. If the master's degree doesn't work for their students, there is always the PhD degree, more years spent in school, and even larger tuition loans that must be paid back. In the July issue of the [ASEP Newsletter](#) (1998), the

American Society of Exercise Physiologists published what is probably the first article in the history of exercise physiology that addressed "...professionalism: myth or reality."

*Fate chooses your relations,  
you chose your friends.*

-- *Christopher Wren*  
(1632-1723)

There are six basic characteristics of a profession: (1) It is intellectual with responsible standards of education and practice with high personal responsibility; (2) It is based on systematic, theoretical views and ideas that are readily researched and published; (3) It has a relationship with professional colleagues regulated by a Code of Ethics; (4) It has a formal professional association supporting a professional philosophy and culture; (5) It is organized internally to promote its members; and (6) It is recognized legally by a certification board staffed by professional members.

If exercise physiology is intellectual and based on systematic, theoretical views and ideas that are researched and published, of which most would agree is the case, then, exercise physiology meets these two characteristics of a profession. However, meeting two of the six characteristics isn't enough to be defined as a profession. All of the characteristics must be applied and understood. So, in a real sense, the way in which exercise physiology has always functioned (i.e., within the context of sports medicine), it

is no wonder exercise physiologists have referred to themselves as working within a discipline.

Exercise physiologists have simply failed to think beyond sports medicine to a more logical extension along the continuum of professionalization. No doubt such thinking is why exercise physiologists do not think much about the importance of having their own Code of Ethics. Obviously, it doesn't take a rocket scientist to realize that a sports medicine Code of Ethics is not an exercise physiology Code of Ethics [2]. The ASEP organization provides the first-ever exercise physiology support of professional relationships with colleagues regulated by an exercise physiology Code and Standards of Professional Practice [3].

To comply with characteristic #4, the ASEP Charter was written, incorporated in the state of Minnesota, and published on the Internet. Exercise physiologists have their own formal professional association with a specific philosophic orientation.

The Society is organized internally to promote its members, and is certified and staffed by a Board of Directors that fulfills #5 and #6 characteristics of a profession. Members of the Board have not forgotten the students' needs, hopes, and dreams. They understand what it is like not to have a job to pay the bills, and they are not so proud to avoid making mistakes on behalf of others. What they do is not a matter of choice; it is a commitment to something better for all students who are interested in exercise physiology.

*People are judged by both the company they keep and the company they keep away from.*

*-- Bonnie Prince Charlie  
(1702-1788)*

### **Professionalism in Exercise Physiology**

There isn't anything simple about promoting professionalism in exercise physiology. It requires the heart, mind, and action. But, what is life without a vision? To be able to see exercise physiology for what it should be and not for what it is allows for living the vision before it comes into full being. Beliefs like this represent the ABC of professionalism. It is first "seeing and believing in the impossible" and, then, the "persistence to stay the course." Having a dream and living it sets that person apart from others.

What about those who aren't interested in the ABC's of ASEP? Simply this, turn your head from them and walk away. Thinking different will always be the difficult people who are content to be stagnant. For the most part, it is simply a matter of time that the "average" stagnant thinker will realize his/her mistake.

*Do unto the others as if you were the others.*

-- *Leonardo Da Vinci*  
(1452-1519)

Inevitably, for most of them, it will be too late for them to fulfill their destiny of something great. This outcome is unfortunate but true as many without the ASEP vision will end up being unfulfilled. Also, it is important to realize that they may never know how their failed thinking messed up the lives of others.

The ASEP leadership has identified their objective and reason for the existence of the ASEP organization. They are tired of mediocrity driven by those who lack a vision of exercise physiology as a healthcare profession. The academic exercise physiologists have failed the students of exercise physiology because they have aimed only at doing research and not professionalism, teaching, and research. Why not read the ASEP vision statement? It is written to generate hope, provide endurance, and motivate the discouraged by answering three questions [4].

*What the organization wants to be?* To be recognized as the leading professional organization of American scholars and practitioners in the study and application of exercise physiology to fitness, health promotion, rehabilitation, and sports training. *What it wants to accomplish?* The Society of Exercise Physiologists is dedicated to unifying all exercise physiologists in the United States and worldwide to promote and support the study, practice, teaching, research, and development of the exercise physiology profession. *Whom it wants to serve?* Through proactive and creative leadership, the Society empowers its members to serve the public good by making an academically sound difference in the application of exercise physiology concepts and insights.

At the core of the ASEP vision is professionalism in exercise physiology. The ASEP leaders understand that attending college and earning a college degree can provide knowledge about a particular area of study, but it does not always connect with a credible job in the public sector. That is why freshmen, in particular, must choose an academic degree that will provide them the increased opportunity of being successful. The decision

is so important that it cannot be put off. Freshmen must seriously ask themselves the question: “What is it that I must know and do now to be successful when I graduate from college?”

### **The Future of Exercise Physiology**

Students’ lives can be changed by a vision, that is, if they had one. Having asked students, “What do you plan to do with the degree” has often resulted answers such as, “I’m not sure.” Or, “With my interest in athletics, it seemed to be a good idea.” A vision is a clear sense of what isn’t presently the case, but can be with the right planning. It is the inner force that drives the students’ desire for a particular future. However, to find that special place in the public sector that is linked to a credible career requires that students think in a new way. It is the only means to moving beyond yesterday’s way of thinking to finding the power and drive to be successful. If this sounds meaningless, why not take a moment to imagine the future of exercise physiology [5].

*We know that all men were created to busy themselves with labor for the common good.*

*-- John Calvin  
(1509-1564)*

*While approaching the building to my right, I got the impression of something special about it. I thought it might be a lawyer's office or big medical clinic. I parked my car in the one spot that was available, off to the side. As I walked towards the front of the building, I noticed the sign above the huge entrance. It read "**Exercise Physiology Sports and Healthcare Complex.**"*

*I was excited to see what was inside. As the door opened, a woman approached me with her hand out. As we shook hands, she said: "Thanks for visiting the future of exercise physiology and healthcare in the United States." I thought the statement was rather bold, although I liked it a lot. As we walked from one room to the next, I was impressed with the colors and detail of the design process. There were trees and plants that glistened in the sunlight. On the wall above the main desk for access and direction to the inner workings of the Complex was one of my favorite quotes by Albert Einstein: "Imagination Is More Important Than Knowledge."*

*There were several rooms just to my left with athletes of all ages. Several athletes were hooked up to metabolic analyzers. I was told that the exercise physiologists were evaluating the athletes' physiological responses. In addition to VO<sub>2</sub> max, they were analyzing the athletes' cardiac output, tissue extraction, hemodynamic pressures, and myocardial function. The purpose of cardiovascular assessments was to inform and educate the athletes regarding the integrity of their training programs.*

*Another rather large room had about a dozen post-myocardial infarction patients exercising under the supervision of Board Certified Exercise Physiologists (EPCs), and still another room with numerous smaller divisions within it with young and middle-aged men and women. I was told that some were being provided exercise programs for obesity while others were being taught scientific techniques for improving lean muscle mass, strength, and flexibility.*

*As we turned the corner, I was surprised to see a dozen smaller rooms with clients exercising, again with several EPCs who were supervising the physiology of the activities. The clients represented individuals with different healthcare conditions (such as diabetes, osteoporosis, depression, and cancer) that a safe exercise prescription can help prevent or correct. The EPCs were explaining the physiology that was involved in the different modes and intensities of exercise. They used pen and paper, graphs, and computers to highlight specific changes in the clients' physiology.*

*There were numerous other rooms and, in fact, there were more than I had time to see or to ask questions about. From rooms with various underwater weighing tanks to aerospace technology and altitude training, I saw six or maybe seven different exercise testing rooms with highly specialized and technical equipment. There were rooms dedicated to just computers, statistical software, data-reduction programs, and big-screen assessment tools; all were supervised by EPCs who, I was told, were writing research papers, grant proposals, and other in-house reports for clients.*

*As we moved from the first floor to second, I noticed there were several nurses, physical therapists, athletic trainers, and strength coaches working in the different rooms. They were hired by the Director of the Complex, an EPC to ensure the integrated work of healthcare professionals. Everything and everyone looked professional, especially as we turned to my right and entered a long hallway. There was an exercise physiologist in the*

*front of a rather large room, giving a lecture on faith, spirituality, and the quality of the client's health. There were about 30 people in the room. I was told that seminars, much like the applied anatomy lecture next door, were part of the educational service to the community and beyond.*

*As we walked to the end of the hallway and took the stairs to the third floor, on one wall I read: "We are here to help you be stronger mentally, physically, and spiritually." There were other affirmations on the walls as well. I was told that the content of the affirmations was chosen to promote self-esteem, positive thinking, and better health of their clients. You had to be there to see it. I was impressed. They knew what they were talking about, and there was a feeling of "something special and fantastic" taking place inside the Complex.*

*The EPC who provided me the tour stated that she was a strong advocate for professional autonomy. She said that the future of the profession of exercise physiology has no limits. The doors are open for more creative sports and healthcare opportunities to sustain personal financial stability and, yet do so with a reasonable and fair cost to the client than ever before. She told me that their recent hires had graduated with a mixture of exercise physiology and business courses, and that their right to hire only EPCs was in their judgment necessary to maintain the integrity of the Complex.*

*There were brochures everywhere. One caught my eye. It read, "Our authority as healthcare professionals stems from society's recognition of the EPC's distinct and complex scientific education." Another brochure caught my attention with the title, "The EPC Revolution in Healthcare." Then, just as I put the brochure down, a teenager confided to me, "I am down in weight. I am getting stronger, and I like myself more. My EPC has helped me get over being so angry, resentful, and jealous of others. I don't think it would be the same at a regular fitness gym."*

*I was told that exercise physiology, as a healthcare profession, allows the EPCs to achieve as much or as little as they are determined to do. Their future is in their hands for the first time ever. I was also told that the image of exercise physiology is one of lifelong learning in both the scientific aspects of sports training and related human endeavors and healthcare, especially in terms of personal satisfaction, opportunity, and caring.*

*Clearly, the community in which the Complex is located has reached out to it and values its presence. It was all there in this Exercise Physiology Sports and Healthcare Complex; a business owned by two EPCs. I knew that clients were getting the help they needed, and that the healthcare professionals in the Complex were primarily exercise physiologists.*

*As I made my way back to my car, I passed a high school athlete bouncing a ball, a mother with her young child, maybe 5 years old, a lady who looked to be in her 80s, and a man and his wife who appeared anxious and worried. It was then I thought, "Wow, they would sure benefit from the EPC counseling that I have observed inside the Complex." It was then that I understood the inscription on the outer wall of the building, The "EPC Prescription" That Rescues YOU.*

*Frankly, I was deeply touched and wondered how many other things I had missed. I should have known this all along, for I was told that the owners of the Complex had a deep visceral interest in and dedication to exercise as the core ingredient to effective healthcare. As I got into my car, I found myself reflecting on the fact that this was evidence that exercise physiology was more than "acute and chronic changes to regular exercise." Also, I found myself asking the question, "Why has it taken so long to discover the power of exercise to build, sustain, and to heal?"*

The seed is planted. The vision is real. All that is necessary now is to nurture it. Reality is the act of working on it. That way, the students of exercise physiology will have a plan to do what is necessary to experience healthcare career opportunities rather than working in Bob's Gym for so much per hour without health benefits. The alternative is ASEP and the leaders' plan to develop board certified exercise physiologists as healthcare professionals. They are hungry for the vision to become reality across the United States and, therefore, they are determined to do what is necessary to make it happen.

*When your vision is from  
God, nothing can stop you.  
It doesn't matter if people  
talk about you. You can  
even be shipwrecked,  
beaten, and starved if you  
are bent on accomplishing  
your vision.*

*-- Dr. Myles Munroe*

## **The Exercise Physiologist's Vision**

Others may say they have the credibility to deliver exercise as medicine, but ultimately they will get lost in their lack of knowledge about exercise physiology. It doesn't matter if this thinking comes across as hard. The fact is that exercise physiologists have no business trying to be physical therapists or nurses. Just because the body is at the core of each profession does not argue that a nurse understands exercise physiology. That is why there are specialty certifications among medical doctors. Not every physician is a heart specialist!

At some point in the future, all exercise physiologists will get this rather simple point of view. They will also understand that the sports medicine's emphasis on fitness instructors and personal trainers is not good for the profession of exercise physiology. Like all other professions, exercise physiology must overcome the resistance to change. That is possible when exercise physiologists start to think differently from yesterday's view of exercise physiology as a research discipline. The idea itself is outdated and, frankly, students are starved for new thinking.

Vision is all about seeing what can be when everything else is saying that it isn't possible. It is about working through the day believing in something better, going to bed with the thoughts of new possibilities, and waking up with great expectations. It is driven by passion that says, "It is possible; all we have to do is believe." Even if your colleagues do everything to stop you, down deep in your heart you know that you are going to pull through. Even if they killed you, it wouldn't stop you. As Myles Munroe [6] said, "Passion means that, no matter how tough things are, what I believe is bigger than what I see."

*Passion is willing to pay the price.*

*-- Dr. Myles Munroe  
The Principles and  
Power of Vision*

Hence, regardless of the hard times college graduates may experience after college, given the existence of exercise science and all the other non-career oriented degrees, the exercise physiologist's expectation of something better must be nurtured. Nothing is more important than thinking right and doing the right things. Take this article, for example, it is one piece of many kinds of acts that help to bring the ASEP vision to fruition. It is saying to the world that, "I am a healthcare professional," "I

am going to be successful,” “or “As an EPC, I am qualified to administer prescriptive exercise as medicine.”

Bach [7] said it best, “...to accomplish great things we must combine awareness with activity, and to reach a given goal we must never lose the measure of our dreams.” If I can repeat the last part of his words in my own way, we must never give up on our vision. Who knows what is possible if we just hang in there. Together, we have a serious chance to create history for all the right reasons. Exercise physiology is the way ASEP members see it. It’s all in how exercise physiologists think and express their thoughts about exercise physiology. That’s why writing about the ASEP vision is so important. If the ASEP members don’t write down the ideas that have provided the 21st century foundation for professionalism in exercise physiology, who will?

Just because ASEP, like other organizations and, yes, like people in general, is going through some trying times doesn’t mean that the vision is wrong. Life is unpredictable. That’s why it is good to have a friend, especially an organization of friends willing to

*Jesus said, “If the blind leads the blind, both will fall into a ditch.”*

-- *Matthew 15:14*  
*NKJV*

help. For certain, many college teachers aren’t interested in helping. In fact, the very moment you decide to start thinking differently, they will say, “You’re not an exercise physiologist. You don’t have a doctorate degree.” They will say, “Do you know what I went through to get my PhD.” By the time they finish verbally putting you down, you feel that it is right to call yourself a personal trainer (even though you have an undergraduate degree in exercise

physiology).

Paul quoted the adage, “Bad company corrupts good character” (1 Corinthians 15:33). So, be aware that there are some adults to avoid. Choose your company! Success depends on spending time with the people who have the same vision as you do. This means turning a blind eye and a deaf ear to everyone who isn’t helping you to achieve your goals as an exercise physiologist. It also means “being at ease” with the challenges of realizing your dreams.

Think about it, as Dr. Myles Munroe [6] said, “There’s no resistance if you’re not moving.... if you don’t want problems, just don’t do anything important in life. However,

if you are following your vision and you encounter problems, you may say, ‘Thank you Lord; at least I’m moving forward.’” It is also important to remember the words “faith, persistence, and patience.” Likewise, as Munroe said in *The Principles and Power of Vision*, “...when people attack your dream....Don’t try to explain and give an answer for everything because you can’t explain anything to critics.”

## References

1. Boone, T. (2009). A Look to the Future. *Journal of Professional Exercise Physiology*. 7:3 [Online].  
<http://www.exercisephysiologists.com/JPEPMar2009ALookToTheFuture/index.html>
2. American Society of Exercise Physiologists (2001). ASEP Code of Ethics. [Online].  
<http://faculty.css.edu/tboone2/asep/ethics.htm>
3. American Society of Exercise Physiologists (2001). ASEP Standards of Professional Practice. [Online].<http://www.css.edu/ASEP/StandardsofProfessionalPractice.html>
4. American Society of Exercise Physiologists (2001). ASEP Vision. [Online]. <http://faculty.css.edu/tboone2/asep/vision.htm>
5. Boone, T. (2009). *Textbook of Contemporary Exercise Physiology*. Lewiston, NY: The Edwin Mellen Press.
6. Munroe, M. (2003). *The Principles and Power of Vision*. New Kensington, PA: Whitaker House.
7. Bach, M. (1965). *The Power of Perception*. Garden City, NY: Doubleday & Company.