**Exercise Science is a Meaningless Degree**

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*The greatest revolution of our generation is the discovery that human beings, by changing the inner attitudes of their minds, can change the outer aspects of their lives.*

-- William James, *eminent American psychologist*

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| ***We can change. We can learn to think differently. We can have a future.*** *It is as Ralph Waldo Emerson said, “What lies beyond us and what lies before us are tiny matters when compared to what lies within us.”* |

xercise science is a popular degree for many students with an interest in fitness and athletics. Unfortunately, it is not a career-driven degree. This is also true for kinesiology, human performance, and dozens of other such degrees [1]. Can students access a real job with the personal trainer certification their teachers talked about? The short answer is that it is possible, but the average salary isn’t very high (i.e., usually $30,000/yr). Students who work in cardiac rehabilitation do not fair much better. Often, the employer will require the candidate to complete the exercise specialist certification or the clinical exercise physiology certification.

It isn’t a good situation when employers place more value on a certification than the education of students. Yet, that is exactly the problem. The employers know that the candidates for a fitness position at their facility can have one of 30 different academic degrees [2]. This is a huge problem for the graduates. For example, by comparison every physical therapist will graduate from college with a physical therapy degree. They don’t graduate with something other than a physical therapy degree. Then, and only then are they required to sit for and pass a licensure exam to practice physical therapy. This is true with occupational therapists, nurses, and dietitians.

Please read the following from a popular University web page [3]. “Upon completion of the undergraduate program, students are qualified for graduate programs in medicine, exercise physiology, physical or occupational therapy, cardiac rehabilitation, corporate fitness, athletic training, nurse practitioner, physician assistant, etc.” Here again, only 44% of the statement accurate. The question is this: Was there any mentioning of a career opportunity immediately out of college? The answer is No.

The department web page also states the following: “The Exercise Science program has approximately 300 undergraduates, approximately 20% who are pre-med, 50% who are pre-PT or pre-OT, with the remainder equally distributed in exercise physiology, cardiac rehab and corporate fitness.” Imagine, at least 245 (82%) of the pre-med students and pre-PT and pre-OT students will graduate without a job! Eighty-two percent of the students and their parents will have spent their money on a defective degree only to return to college with higher tuition and, very likely, higher living costs.

***The enemy of truth is illusion.  Illusion is "a false interpretation by the mind ... a belief or hope that has no real substance."  Illusion comes when we perceive something to be true that isn't true or is only partly true.***

-- Dr. Fathi El-Nadi

Two things are clear. First, students should think hard and long before majoring in exercise science. There is no career path. There is no way to deal effectively with the economic challenge of thousands of dollars in tuition loans and other costs of attending college. There is no way to earn sufficient money to survive in the real world. Second, department chairs and the faculty should deal with this problem by upgrading exercise science to a credible exercise physiology major and, then, come together and share in the work of supporting the professional development of exercise physiology as a healthcare profession through the ASEP organization. After all, exercise is medicine and exercise per se is power, but it has to be packaged and marketed in accordance with decades of established professional policies and procedures.

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| *Whatever you can do or dream you can, begin it. Boldness has genius, power, and magic in it.**-- Goethe*  |

Think about it. Why are the academic exercise physiologists so slow to understand the basics of professionalism? Where are the self-imposed if not mandated higher standards? Part of the answer is that they see themselves as big-time researchers. Many teachers aren’t even interested in teaching! After all, is teaching actually valued in the United States? Those who do research are recognized when the paper is presented or published. And, it is required for promotion and tenure.

Remember, most exercise physiologists who do research are college teachers. Non-doctorate exercise physiologists are seldom ever hired to do research. Again, physical therapists do research but they are also required to engage in professional development. Academic exercise physiologists aren’t required to plan for or teach professional development. This is a problem.  If an exercise physiologist is a college teacher, the emphasis should be on the students’ education.  How the teacher articulates his or her future as a professional should be second.

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| *If one advances confidently in the direction of his dreams…he will meet with a success unexpected in common hours.**-- Henry David Thoreau* |

Continuing to turn a blind to this problem isn’t smart. Yet, that is exactly what the majority of the college teachers do on a regular basis. They tell their students that: “Everything will be okay. Do an internship. That will help you get the experience you need. Also, get a certification.” But, what about my degree being exercise science? Can I call myself an exercise physiologist? “Sure, you can.” But, I don’t have a degree in exercise physiology. “Get over it. That’s just the way it is.” As a result, the college teachers fall short in specifying a standard of professionalism.

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| ***Despite what academic exercise physiologists celebrate today, they still need to promote a set of core principles and values that celebrates professionalism; a process that requires leadership, standards of practice, measurement of achievement, and a total commitment to excellence by all involved.*** |

The majority of the students with an undergraduate degree in exercise science or kinesiology are hopelessly miserable after college. There are no exercise science or kinesiology jobs. That’s why students are forced to refer to themselves as exercise physiologists. They realize it is wrong, and they get that the degree is a waste of time and money. Yes, it is a ridiculous degree. Students end up taking two to three exercise physiology courses (often only one with a lab) along with a dozen courses that are physical education courses. Everyone seems to have forgotten that the exercise science major was created out of the failure and desperation that associated with physical education decades ago. To help savage the departments, the physical education major was renamed as exercise science.

The best estimate is that there are approximately 3,800 colleges and universities in the United States.  So, obviously the illusion of something good coming from exercise science is a big problem.  Most importantly, students need to understand that many jobs are filled by individuals without a college degree!  Many students, if not most, expect to access employment to pays the bills.  Most analysts view college as the important step to accessing viable jobs.  But, when students are sat up to fail with low paying jobs, the only thing unique about exercise science is the illusion of something better.  If you have the time to study the exercise science content on the Internet, you will find many examples of the following:

* “Many students with this major are preparing to enter graduate programs in their career area of interest, while others may seek positions in pharmaceutical sales, or sales or marketing of medical, fitness, and sports related equipment. Others seek employment as rehabilitation specialists in hospitals." [4]
* "The primary objective of the Exercise Science Program is to assist students in preparing themselves for success in graduate study…." [5]
* "Our graduates are currently employed as athletic trainers, work in hospitals as cardiac rehabilitation specialists, program design in corporate fitness facilities, serve as personal trainers and work in commercial health and fitness centers." [6]
* "The applied exercise science major prepares students for leadership roles in a number of career opportunities, including clinical exercise settings and corporate and hospital wellness programs, or as personal fitness trainers, exercise specialists, and strength and conditioning coaches. Students are well prepared for graduate programs in exercise physiology, biomechanics, exercise and sport psychology, or health and wellness." [7]
* "The Exercise Science curriculum prepares graduates with the knowledge and practical experience necessary for employment as strength and conditioning specialists, personal trainers, corporate and community fitness leaders, and cardiac rehabilitation exercise specialists." [8]
* "Students wishing to enter the job market with a B.S. degree in exercise science may be prepared for entry level positions with corporate and community fitness programs, health clubs, YMCAs and similar fitness related organizations." [9]
* "The major is designed to prepare students for careers and work in exercise and sport sciences, and allied fields." [10]
* "Capital University [exercise science] graduates can find employment as personal trainers and fitness directors in a variety of settings. [11]
* 'The Exercise Science major is designed to give students a scientific understanding of exercise and its effects on the body. Coursework and hands-on opportunities ensure that students are well-prepared for careers as exercise professionals in corporate, clinical, commercial and community settings." [12]
* "Job prospects for Northwestern’s exercise science students include careers as personal trainers, strength and conditioning specialists, fitness program directors, cardiac rehabilitation specialists, physical and occupational therapists, and college professors." [13]
* "The Exercise Science major is designed for students who wish to work in the wellness and fitness promotion field." [14]
* "The undergraduate Exercise Science major is designed to prepare a student for a career in exercise programming and supervision for individuals or groups across the lifespan." [15]
* "Graduates are employed in clinical, corporate, commercial, governmental, and community settings." [16]
* "The mission of the Exercise Science Major program at Central Christian College is designed to produce graduates who are qualified in the areas of exercise leadership, exercise testing, and evaluation, exercise prescription, and program directors." [17]
* "The exercise science major is designed for students interested in strength and conditioning as well as preparation to be personal trainers or fitness specialists." [18]
* "The Exercise Science major is a flexible, science-based curriculum designed for students wishing to pursue a wide range of goals including working in the health and fitness industry, health professions including pre-medicine and pre-physical therapy as well as graduate study in exercise science." [19]
* "Professionals in exercise science assist in this through providing services in profit-making organizations such as fitness clubs, health clubs, racquet clubs, corporate fitness/wellness organizations, and in private training. Employment opportunities are also available in rehabilitative and preventative fitness programming at hospitals and sports medicine clinics." [20]

***The Truths and Untruths***

Do these statements represent the reality of exercise science?  To answer this question, consider first a definition of truth.  Senator Robert C. Byrd said on the Senate Floor, May 21, 2003 that, "Truth has a way of asserting itself despite all attempts to obscure it.  Distortion only serves to derail it for a time.  No matter to what lengths we humans may go to obfuscate facts or delude our fellows, truth has a way of squeezing out through the cracks, eventually."  What has become painfully clear is that many of the statements from exercise science websites are an illusion.  They are without reality; a distortion of the facts that have now become obvious from many cracks within society.  The integrity of a college education, its traditional roots in ethical thinking and practice, and its social implications have all but disappeared in some departments.  Now, the next question:  "Are exercise science students actually qualified for the following jobs?"

* Fitness clubs
* Health clubs
* Racquet clubs
* Corporate fitness/wellness organizations
* Private training
* Rehabilitative and preventative fitness in hospitals and sports medicine clinics
* Health and fitness industry
* Health professions including pre-medicine and pre-physical therapy
* Strength and conditioning
* Fitness specialists
* Exercise leadership
* Exercise testing and evaluation
* Exercise prescription
* Program directors
* Clinical, corporate, commercial, governmental, and community settings
* Exercise programming and supervision for individuals or groups across the lifespan
* Wellness
* Fitness promotion
* Fitness program directors
* Cardiac rehabilitation specialists
* Physical and occupational therapists
* College professors
* Exercise professionals in corporate, clinical, commercial, and community settings
* Exercise and sport sciences
* Corporate and community fitness programs
* Health clubs
* YMCAs
* Clinical exercise settings
* Corporate and hospital wellness programs
* Exercise specialists
* Commercial health and fitness centers
* Pharmaceutical sales
* Sales and/or marketing of medical, fitness, and sports related equipment

No doubt it is true that exercise science graduates may qualified for many of the jobs listed above, given the similarities.  But, what is obvious is this:  It is a fact that they are not qualified for all of them.  Again, what is an illusion?  The exercise science major appears to be a great degree to prepare for the variety of jobs.  Again, are the graduates actually prepared for all them?  If not, then, it is an illusion that must be corrected.  That is unfortunate and sad. But it is the truth and it should not be that hard to separate reality from illusion.  On the face of it, this analysis may sound terribly harsh.  It is nonetheless a necessity.

While the exercise science major may have started out as an alternative to the physical education major, it is clear that it does not have sufficient scientific depth (either in course work or hands-on laboratory experiences) to warrant its continuation as presently described in most Internet web pages. Students who agree with this conclusion yet stay in the major are not thinking very well.  Certainly there is a place for fitness instructors and those who want to be strength coaches, but what is the point of thousands of majors in exercise science?  This dilemma should be simple to understand.

I wish more than you can imagine that an academic exercise physiologist would stand up and speak the truth to his or her students and faculty. Exercise science is a meaningless degree. It is not worth the tuition dollars. No one should have to dismiss a degree after it is completed to then think about majoring in a credible degree to get a job. Every undergraduate degree should help transition students from college into credible jobs in the public sector. If after months of searching and/or being paid for part-time work, the recent college graduate has to move back home, the degree is obviously meaningless.

Okay, then, as a student, what should I do? It isn’t complicated. While being in college is a good time to experience life, make friends, and grow up, smart students understand why they are in college, why they selected the college they are in, and have a huge appreciation for the cost factor. They aren’t willing to spend $30,000 to $130,000 in tuition loans to get a meaningless college degree. After all, a college degree is supposed to mean something -- right? So, what are the right answers? Is it as simple as the ASEP leadership says? “Join the first-ever professional organization of exercise physiologists, helps us to create a future of credible healthcare workers, and your future will be enhance.”

I don’t know how if you have followed the ASEP story. The organization was founded in 1997. Why? The ASEP leaders believe that there is a better way; a new view of exercise physiology. Frankly, they have heard too long about the 1000s of students who cannot find a job after college. Their only alternative is something like this: “Mother, I need some financial help with applying for graduate school in something other than exercise science!” Why is that John? “Because I just figured out that exercise science majors graduate without credible career opportunities.” But, that isn’t what your teachers said. “Mother, they lied to us!”

When one looks at the role of the ASEP organization in professional development, it is apparent that most students are not aware of the importance of the organization.  They need to know the truth about the tragic illusion of exercise science.  And, when they start receiving proper information, then, things will change in academics and students will be able to think about an education that creates, increases, nourishes, and enhances the credibility of exercise physiologists as Board Certified healthcare professionals. In fact, increasingly, it is becoming clear that the exercise science degree is obsolete and that a big need for new leaders of the future with the following characteristics:

1. High levels of perception and insight into the professionalism of exercise physiology.
2. Extraordinary levels of motivation to help colleagues and students understand the change process.
3. Willingness and ability to involve others and elicit their participation, knowledge, and skills in the growth of exercise physiology as a healthcare profession.
4. Self-leadership and accountability to take control of exercise physiology.
5. Create and shape exercise physiology, rather than passively accepting the sports medicine influence.
6. Seize the opportunity to be part of the American Society of Exercise Physiologists.
7. Think straight, never give up, and work to build the students' future in exercise physiology.
8. Communicate the ASEP vision, core values, and principles of professional development and credibility in the academic exercise physiology major.

"We must live the change," said Mahatma Gandhi.  Few of us however are willing to change.  Yet, if exercise physiologists are not willing to live the change, how can they ever learn to take responsibility for who they are and what they represent?  Perhaps, it is important to point out that exercise physiologists cannot learn the power of change without being part of the membership of an organization that holds itself accountable for achieving specific goals and objectives.  Working together, the risks that associate with change are easier to deal with (e.g., job, friendships, self-esteem, etc).  It many ways, it all comes down to courage!

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| ***Is the time to act now?  Or, is that an illusion too?***  Meaning simply, is change really taking place in most situations or is it that everything is actually staying the same?  Is it likely that the idea itself, "each exercise physiologist must take responsibility for the professional development of exercise physiology" is an illusion? |

Is the time to act now?  Or, is that an illusion too?  Meaning simply, is change really taking place in most situations or is it that everything is actually staying the same?  Is it likely that the idea itself, "each exercise physiologist must take responsibility for the professional development of exercise physiology" is an illusion?  How personal is such thinking?  If so, what are the factors that lead to changing how a person thinks?  Obviously, there are many questions without answers and there is the illusion of change itself.  Too often, the attachment to past thinking and the tendency to seek power in decision making that involves the status quo produces at best the illusion of change.

What is obvious is this: Those who are in power are not likely to give it up easily.  Meanwhile, they are likely to work at keeping things as they have been.  After all, power is control and control is status.  No one is going to willingly give up his or her power position, even if it means doing the right thing.  Hence, the truth is they are not likely to change for several reasons.  First, they are uncomfortable with the new ASEP culture of exercise physiology.  Second, their unfamiliarity with all that which is necessary for professional development of exercise physiology is simply too threatening to them. Third, their reluctance to support the ASEP organization is partly explained by the desire to not admit their bias against the ASEP leaders.   Four, no officials of an organization enjoy admitting they are not the absolute experts in "exercise as medicine" as they profess.  Eventually, their reliance on coercive power will fall apart.

ASEP is the freedom to think as exercise physiologists.  Obviously, there will continue to be organizational responsibilities, if not more, and there will be major professional obligations as well.  There will also be important lessons to be learned, as has been the case during the past 10 years since the founding of ASEP.  The change process from sports medicine to exercise physiology requires many steps and a considerable length of time.

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| *“We are the ASEP organization, and we are making a difference. Our hearts are in the right place for the right reasons – we just need more of them!"* |

In many ways, it is appropriate that it has taken so long for exercise physiologists to recognize the illusion of exercise science and the fact it is not producing (and has not produced) positive results for students.  ASEP is, therefore, in the right place at the right time to deal with the tragic effects of the exercise science illusion.  And, there is plenty of evidence to support the urgency

for change along with the well-documented ASEP vision and short-term wins (such as accreditation, board certification, research and professional journals, code of ethics, standards of practice, and more).  Clearly, even though the illusion continues to exist, the ASEP leaders are handling the change process rather well.

Remember the saying, “If you don’t know where you are going, any road will get you there.” Okay, what about this saying, “If you have conviction and belief, it is a matter of time.”  I am sure that you understand my point.  Success is a product of hard work.  It is directly defined by an “attitude” of success that says in essence, “I’m the best, and I’m committed.” Otherwise, why would a person who graduates from an accredited academic program work for a fly-by-night operation?  Leaders and educators know the difference, and they (in particular) are driven to be winners among others who value setting goals and holding each other accountable for one’s work.  The driving force is their passion to do the right thing for the right reason.  They are not interested in doing the wrong thing.  They are interested in doing the right thing the very best possible.  They are passionate about their work, and passion is everything!  There is nothing new about any of this except in the context of exercise physiology.  There is nothing new about the stimulating feelings like, “We are the ASEP organization, and we are making a difference. Our hearts are in the right place for the right reasons – we just need more of them!" [21]

**References**

1. Boone, T. (2001). *Professional Development of Exercise Physiology*. Lewiston, NY: The Edwin Mellen Press.
2. Boone, T. (2009). *The Professionalization of Exercise Physiology*. Lewiston, NY: The Edwin Mellen Press.
3. Boone, T. (2009). Exercise Science is Not a Sound College Investment. *Professionalization of Exercise Physiologyonline.* 12:3 [Online]. <http://faculty.css.edu/tboone2/asep/ExerciseScienceIsPoorCollegeInvestment.docx>
4. *Indiana University, Bloomington.* (2007). Exercise Science.  School of Health, Physical Education, and Recreation. [Online]. <http://www.hper.indiana.edu/degrees/exercisescience.shtml>
5. *Truman State University*. (2007). Exercise Science. [Online]. <http://hes.truman.edu/es.asp>
6. *Wayne State University.* (2007). Exercise Science. [Online]. <http://academic.wsc.edu/nss/hhps/exsci.html>
7. *University of Evansville*. (2007). Applied Exercise Science. [Online]. <http://www.evansville.edu/prospects/areasofstudy/exercisesportscience/programs.asp>
8. *Creighton University.* (2007). Exercise Science. [Online]. <http://admissions.creighton.edu/Portals/14/Forms/PDF_Majors/ExerciseScience.pdf.>
9. *Western Michigan University.* (2007). Health, Physical Education, and Recreation. Exercise Science Program. [Online]. <http://www.wmich.edu/hper_esp/undergraduate.htm>
10. *Skidmore College*. (2007). Exercise Science Major. [Online]. <http://www.skidmore.edu/academics/exercisescience/majors/index.html>
11. *Capital University.* (2007). Exercise Science. [Online]. <http://www.capital.edu/1636/>
12. *Augustana College.* (2007). Exercise Science. [Online]. <http://www.augie.edu/dept/courses/exsci.html>
13. *Northwestern College.* (2007). Exercise Science. [Online]. <http://www.nwciowa.edu/kinesiology/excercisescience.aspx>
14. *Manhattan College*. (2007). Exercise Science. [Online]. <http://www.manhattan.edu/academics/education/phys_ed/physed-exercise.shtml>
15. *Minnesota State University.* (2007). Exercise Science. [Online]. <http://ahn.mnsu.edu/hp/undergraduate/exercise.html>
16. *Illinois State University.* (2007). Exercise Science. [Online]. <http://www.kinrec.ilstu.edu/undergraduate/exercise_science/>
17. *Central Christian College.* (2007). Exercise Science. [Online]. <http://www.centralchristian.edu/acadpe9.html>
18. *Trinity College.* (2007). Physical Education / Exercise Science. [Online]. <http://www.trnty.edu/depts/PDF/Physical%20Ed%20-%20Exercise%20Science%2007-08.pdf.>
19. *Cornell College.* (2007). Exercise Science. [Online]. <http://www.cornellcollege.edu/physical_education/exscience.shtml>
20. *University of Nebraska - Kearney*. (2007). Exercise Science Major. [Online]. <http://www.unk.edu/acad/hperls/index.php?id=7808>
21. Boone, T. (2004). The Culture of Exercise Physiology. *Journal of Professional Exercise Physiology*. 2:10 [Online]. <http://www.exercisephysiologists.com/JPEPOctober2004/index.html>