



Lessons learned

In this week's recap of what is going on in the world of biomechanics, we are looking at a slightly different publication.

Usually, when we read articles in scientific journals, we are looking for results of current studies or methodological approaches used by other research groups. Most journals however also publish editorials on a regular basis. The *Journal of Applied Biomechanics* has started a series on "*lessons learned*", featuring impactful and renowned researchers who share valuable advice they have learned throughout their lives and careers.

The article we are looking at this week was written by Robert J. Gregor, who is affiliated with the University of Nevada and the Georgia Institute of Technology, and published in Volume 36: Issue 4 of the *Journal of Applied Biomechanics* in 2020.

As someone who just entered the field of biomechanics and is looking to build a scientific career, this article mentioned two points that I found to be very interesting. And don't worry, I am not going to just recite the whole article, it's not that long and I will link it at the end of this post.

The first phrase that caught my attention is about the development of the discipline of biomechanics. Gregor writes that in his over 40 years of working in biomechanics he witnessed the end of an era of scientific "silos" towards the enrichment of the interdisciplinary approach. While today there are dedicated study programs for degrees in biomechanics, it remains important to remind oneself of this history and to not forget that while biomechanics combines numerous fields of research, these fields do not cease to exist. "Studying the performance of an integrated physiological system, that is, the human body" requires extensive knowledge from the fields of physiology, motor learning, engineering, medicine, athletics, physics and many more. Being able to view human movement from a more holistic perspective is a quality that successful biomechanists share, according to



Gregor.

What I take away from this is, that while it is important to be proficient and knowledgeable as a member of the biomechanical community, one should always remain open and look for opinions and advice from colleagues from other specialty areas, as this is how biomechanics was born in the first place.

Later on, when talking about the importance of finding your thread of research that you can uniquely contribute to, Gregor highlights the importance of another aspect of communication in research. He states that success is facilitated by the appropriate communication of your findings to the right audience. But there is a point, way earlier in the scientific cycle, that requires just as much attention when it comes to careful and elaborate scientific exchange. In biomechanical research clinical, athletic, and scientific actors share the same basic principles to address specific questions. To ensure the best possible quality of research and increase the chances of successfully solving a given problem, Gregor states that it is important for all sides to listen to each other and ask the right questions. “It is the questions that drive the selection of the tools”, is a quote from the article that I think gets to the bottom of the matter really well. However, during my education at the university, the focus was mainly on learning and perfecting the tools needed to solve different kinds of problems. Thus, finding “a well-defined question is what requires our most serious and profound attention”, is the second point from Gregor’s article that I would like to highlight in this post.

Both points Gregor wrote about in his article convey the importance of communication and a well interconnected scientific community. It’s an idea that we share at the Biomechanist and hope to be able to contribute to. Connecting with people from around the world is something we are all doing on social media. So why not extend this and connect to members and experts of the same scientific community? Stay tuned for more on this!

Link to the full article:

<https://journals.humankinetics.com/view/journals/jab/36/4/article-p189.xml?content=pdf-6970>

Gregor RJ (2020) Lessons Learned. *Journal of Applied Biomechanics*, 2020, 36, 189
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