

Lessons Learned

JAB continues a series of editorials from highly impactful faculty and researchers on “lessons learned” throughout their careers or lives. The hope is that the rest of us can benefit from their experiences. I would like to thank these individuals for sharing their thoughts with us.

—Michael Madigan, Editor-in-Chief

When asked to write an editorial on “Lessons Learned” for the *Journal of Applied Biomechanics*, I obviously felt honored, if not flattered, and was fast to say, “Yes.” When the self-imposed deadline came closer, I felt stupid for still not being able to predict how much time I would have available a few months later. But now that I have started writing, I feel better again, not only because the feeling of being flattered returned but also because it is fun to face the challenge.

This is, in a way, illustrative of my career in biomechanics. I have often said yes to invitations to collaborate on a project, write a proposal, present results, review grants or papers, and so on without carefully considering the consequences—flattered to be asked for my expertise and to be given the chance, but often regretting my decision when I had to deliver. Somehow the calendar that seems empty at the time of accepting the invitation has filled up with activities related to other projects by the time it is necessary to start working on this new commitment.

Would I recommend others to be more selective? I do not know. There are most likely 2 types of enjoyable and potentially successful scientific careers. One is to aim to be the top specialist on a specific topic or methodology, and the other is to be the opportunist working on many different topics. I guess the merits of the former may be clear, but, as biology teaches us, when circumstances change, specialists are at risk of extinction and opportunism may be good for survival.

The joy of being an opportunist is getting to work on different topics and interacting with many different people. The benefit may be that it allows adaptation to varying circumstances, most notably to shifting priorities among funding agencies. This has certainly helped me get along. I started out in occupational biomechanics with a focus on low-back loading, later added studies on upper-extremity loading, stopped working on the latter when shifting attention to clinical biomechanics—again with a focus on the low back—and around the same time followed my curiosity (and the

agenda of funding agencies) to work on the control of posture and gait, particularly in relation to balance. Working on different topics simultaneously and shifting focus from time to time has kept my work interesting. Shifting focus also led to cross-fertilization. It is surprising to see how, isolated from each other, different disciplines can address the same topic and individuals within one discipline can work on different topics. The downside is that life can become pretty hectic and that it becomes more and more difficult to keep up with the literature because shifting to a new topic usually does not mean completely abandoning previous ones. The aspect of easily committing to new opportunities when my calendar still seems to allow for it has forced me to start or finish up work that would otherwise have been left waiting for quieter times—in other words, that would never have gotten done. So, whether it is better to be a specialist or an opportunist may depend on personality.

A related and appealing aspect of being an academic is the opportunity to collaborate with different people from different disciplines, nationalities, and cultural backgrounds. I think that the critical success factor for this is openness. This includes being open to sharing your plans and ideas and to acknowledging your biases and being open to learn and value those of others. Openly sharing plans and ideas is a frightening thing; there is a fear of not being rewarded for your intellectual contribution because someone else gets there before you, whether it is in relation to obtaining grants, getting results published, or, more generally, having an impact and getting recognition by peers and possibly the general public. I would argue that we should overcome this fear. My reasons are as follows: (1) If a colleague answers my question before I do, I still have the answer and can move on to the next question; (2) Most likely my idea is not unique anyway; (3) I will miss important feedback if I do not discuss my ideas; and (4) Even if it is not beneficial to me, for me to share my ideas, it may accelerate science. Preregistration, besides offering other benefits, may be a solution for this problem. It allows us to share research plans and, at the same time, claim them as our intellectual contribution. I am very curious to see how preregistration and other aspects of “open science” will affect biomechanics in the years to come.

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