Cutting-edge research bundled with publications in prestigious academic journals is considered to be a solid foundation for a university faculty position. As a young scientist preparing for a career, it is easy to overlook the fact that many faculty positions are split appointments and carry a significant teaching load. An overall focus on research without emphasis on instruction can leave you behind other candidates that already have teaching experience.

In the past, higher education passed along fundamental and scientific knowledge delivered in the form of lectures, a format that is increasingly vanishing for several reasons. First, a lecture format has been proven to be inefficient, and students retain little of the knowledge that has been delivered. Second, today’s internet and cell phone technology allows anyone to access fundamental knowledge anywhere. Third, a graduate nowadays has to have more skills other than retaining knowledge of their field.

New teaching concepts have emerged with the goals of making education more effective and teaching more than fundamental knowledge. An instructor can select from a broad variety of techniques to create engaging learning content such as flipped class rooms—to mention just a few. And assessment methods go way beyond exams. Posters, presentations, tutorials, and Wikipedia pages can be incorporated into student assignments that teach skills that students will need later on in their jobs.

Plan Ahead with an Eye on Education and Teaching

So how do you prepare for all this during your Ph.D. and postdoc? The key is to plan ahead and have an eye on education and teaching. When you look for a Ph.D. or postdoc position, ask your prospective adviser about teaching opportunities. Your adviser will most likely have you become a teaching assistant (TA) where you can help to teach some of his or her courses. While this is a good opportunity to get some experience, in most cases, you will not get the full teaching experience. For example, you won't develop curricula. And this may not even be your adviser’s fault. Some institutions require that courses are taught by teaching faculty only. But there are also institutions that allow or even facilitate teaching experiences for graduate students and postdocs. In light of this, make sure to learn about the teaching opportunities at your current and prospective institutions.

Even if your institution does not allow you to teach or your adviser does not have a teaching appointment, you can still develop and improve your educational skills. But in this case, you may have to find something outside of your university. Our communities are full of teaching opportunities. For example, consider becoming a museum tour guide, joining the Master Gardener program, volunteering with the Boy Scouts of America, passing along sports skills at the YMCA, or helping people to prepare for GED tests. This may not look as appealing as teaching or assisting a university course, but you can still have great experiences.