

The unbearable lightness of teaching...

Just listen to the President of the university and hear what you don't want to hear *again*. "Our university is research-driven, we are among the best on the 'bla-bla' list, and, of course, next year we will be even better." What has happened to the university as the honorable place where you become a 'homo universalis', well trained in abstract reasoning, in the art of scientific research, out-of-the-box thinking and eloquence to convey ideas to society?

Which of the two is more important, the output of well-trained people – M.Sc., PhD, post-doc, P.D.Eng. - or the number of publications in refereed journals? Just listen to the talk of the town: research dominates everyday life. Writing grant proposals burns many hours of a professor's life. In contrast, keeping track of his 'extended family' engaged in 'real life' jobs in industry, banking, policy making or teaching has low priority.

At university, the Hirsch index is the yardstick for excellence. One has a Hirsch index equal to H when H of one's papers is cited in literature at least H times. A successful career ends at $H=20$ to 25; the giants end up with an H -value in the range of 40 to 50. But why don't we have an index for our educational impact? Are we ashamed of this aspect of a university career?

The Feynman index

We have to decide where the major impact of our work lies. Is it in research, where most of our 150 papers lose their impact after a couple of years? Or is it in the 150 to 200 members of our 'extended family', who have settled down in their careers outside university? Their success depends on the academic quality of their education – both in content and in personal skills. Their impact goes on for 35 to 40 years, in turn influencing other people.

A well-educated 'homo universalis' has an impact that goes far beyond a brilliant scientific paper in a renowned journal. I argue that we cannot go on without an index for educational impact. To honor a great educator in the field of physics, I propose to call it the Feynman index.

Of course, research is very important for a university. It is the major tool for educating our students. But the phrasing of the president should read: "We are a center

of excellence for teaching at an academic level, and yes, we are highly successful in acquiring the best tools for this education by cutting-edge research, and yes, our alumni end up in society in those jobs where they are on the crossroads of new developments, and yes, they are making the decisions that count for our future."

My proposal is to define an educational index based on the number of people directly influenced by our 'extended family'. To obtain a Feynman index equal to F ,

at least this number of one's former students runs a group with at least F employees. The nature of the group is unimportant. The dissemination of knowledge *and* professional approach is what counts. Educational impact is thus measured by successful careers of our offspring.

The Feynman index forces universities to keep track of their alumni: not only for some serious PR-boasting, but for real feedback. The extra effort may seem useless, but the same has happened in the field of tracking citations: a careful analysis of scientific output has helped to improve the quality of university. Detailed knowledge of the performance of our alumni will provide valuable feedback to university. It is time to make a change: introducing the Feynman index can be of major help. ■

