

USP makes Brazil a better country

Carlos Henrique de Brito Cruz, FAPESP scientific director

USP makes Brazil a better country, and that is no small feat. What is more, in the context of higher education, it is certainly the institution that makes the greatest contribution to this national objective.

As a result of the internationalization strategy of São Paulo research, I have visited a number of foreign entities associated with research. Invariably, researchers there have already heard of USP and never fail to express great interest in joining forces and working with USP researchers. Also considerable is their interest in receiving students from the university.

With all these achievements and numerous others that are on display in this *Pesquisa FAPESP* supplement, it is no surprise that Brazilians and residents of São Paulo want even more from USP. After all, more and better results are always expected from those committed to excellence and capable of delivering outstanding results.

The problem is that the pressures are often antagonistic: some want more vacancies, others call for more engineers and still others demand better engineers. Will it always be possible to offer more and better engineers? What defines a reasonable level? Some industries demand more integration with businesses while others expect more university support to unions and non-governmental organizations. Nearly all would like more patients to receive care at the university's hospitals.

In many cases, the same people who criticize USP's high cost also criticize the university for not appearing among the top 50 in international university rankings. They do so without realizing that at universities that normally occupy the top spots, like Berkeley, Davis or Stanford, yearly spending per professor, to use a specific rather than general indicator, is twice (Berkeley and Davis) to as much as five times as high (MIT and Stanford) as that at USP.

With its potent interplay between teaching and research, a recognized driver of academic quality, USP awards more doctorates than any other university in Brazil, and in this, it is among the world's best. Every year, USP authors publish 22% of their scientific articles with authors in Brazil, which represents more than three times the volume published by authors from UFRJ or UFMG, Brazil's largest federal universities. It also represents a percentage twice as large as what the University of California system represents in total U.S. scientific production.

In terms of scientific impact, articles by USP authors are cited in specialized literature at rates well above the national average, approaching the global average, and in the field of physics, USP authors have largely exceeded the global average in recent years. USP graduates approximately 7,400 professionals and is responsible for 6% of all engineers awarded degrees in all 111 public universities in Brazil every year.

The interplay with society is lively, even if it sometimes goes unnoticed within the university. USP graduates occupy positions of leadership in all areas of domestic life, whether they be politics, business, industry, agriculture, science and technology research, arts and culture, journalism, education or academia. Five percent of all university research, an amount equal to the 2012 average reported for U.S. universities, is funded through research agreements with business entities.

What makes USP a university recognized worldwide is its historical commitment to the pursuit of academic excellence, like that seen at the world's best universities. This pursuit is visible in every action by the university, no matter how small. It is visible in the endless discussions that precede decisions, in the changes in direction and in the standing firm, in the contradictions and in the agreements. Excellence is often a moving target that seems to change as it gets closer, much like a mirage. To those on the outside, university operations often appear chaotic and without objectives. For those in the know, however, it is easy to see that while the method appears confusing, the objectives are indeed well-defined and the results are what lead to academic progress.

The intensity of research activity, especially after establishment of the full-time dedication to teaching and research regime in the early 1960s and institutionalization of graduate studies in the late 1960s, has enabled the university to establish a rich environment of learning and teaching with strong international ties.

The system of constitutional autonomy linked to budgetary revenue from collection of the Tax on Distribution of Goods and Services (ICMS) instituted in 1989 allowed further enhancement, with an increase in the number of vacancies and enrollments, in the number of students graduating and in the high quality of research and graduate studies. Since 1989, while the number of professors has grown 6% (from 5,669 to 6,008), the number of undergraduate students has grown 82% and the number of graduate students has grown 116%. The number of students completing undergraduate programs grew 97%, and those receiving graduate degrees increased 260%! After implementation of its system of autonomy, it was as if USP had established, within itself and to the benefit of each and every São Paulo taxpayer, the equivalent of a Unicamp or a UFMG in terms of educational and academic results, all without increasing the number of professors or employees.

In conclusion, I reiterate my original thesis. USP makes Brazil a better country. That is no small matter and is reason for celebration. Congratulations, USP. May the next 80 years be even better.