Doctoral Research Programs on Upswing

BOSTON UNIVERSITY’S DOCTORAL research programs have shown significant and widespread improvement over the past 15 years, according to an assessment released in September by the National Research Council (NRC). The new report does not rank programs, but measures the quality of specific aspects of them, such as faculty research productivity, institutional support for students, and the diversity of faculty and students. It shows significant advancement in 11 of 24 BU programs that were assessed in both the current study and a previous study, published in 1995. In the current study, 39 BU doctoral programs were examined. Programs that showed comprehensive advancement include physics, philosophy, psychology, electrical engineering, and mathematics. Biomedical engineering, geography, economics, and religion were also highly placed.

“Our doctoral research programs are very important to the success of Boston University,” says President Robert A. Brown. “We are pleased with the increased recognition of the quality of our programs. In the last two decades, the University has risen rapidly in the ranks of major private research universities, as the results of the NRC study verify. We have continued to focus on increasing the quality of our faculty and the impact of our programs. As a result, I think our programs today are even better than indicated in the NRC study, which is based on data that are five years old.”

The NRC functions under the auspices of the National Academy of Sciences, a private, nonprofit institution that provides advice intended to promote the acquisition and dissemination of knowledge in matters involving science, engineering, technology, and health.

The data used by the NRC were collected in 2005 and 2006 from more than 5,000 doctoral programs in 62 fields at 212 universities in the United States. The group warns that a true comparison cannot be made between this year’s results and those in the earlier study, because the criteria used by the NRC have changed. Previous assessments, published in 1982 and 1995, were based primarily on reputational factors, and this latest report is designed to be more data-based.

The NRC’s complex system for assessment offers five sets of rankings of programs in each field, based on data on 20 characteristics. The report offers ranges of rankings on three dimensions of doctoral education: research activity,
based on publications, citations, and other honors, and the percent of faculty with research grants; student support and outcomes, based on the percent of students funded in the first year, the percent of students completing degrees in a given time period, and expected placement in academic positions; and diversity of the academic environment, based on the percent of faculty and students from underrepresented minority groups, the percent of faculty and students who are female, and the percent of students who are international.

Daniel Dahlstrom, a College of Arts & Sciences professor and chair of philosophy, whose doctoral program placed well in the study, says his faculty’s continued excellence is evident in their many publications and awards. “Charles Griswold’s book Forgiveness, published three years ago, continues to be the centerpiece of conferences across the globe,” says Dahlstrom.

Solomon Eisenberg, a College of Engineering professor and chair of biomedical engineering, says his department’s funding has increased from just over $14 million in 2001 to $28 million this year; 77 percent of the funding comes from the National Institutes of Health. “We’ve had a big bump,” says Eisenberg. “One way to think about it is dollars per faculty member. We have 33 people on the faculty.”

Robert Kaufmann, a CAS professor and chair of geography and environment, says one PhD candidate was the first scientist to use satellite sensing technology to prove that parts of the planet were greening earlier each spring and another used the technology to document changing land use in China, as people were drawn to urban centers.

Because the NRC was working with data that are five years old, the new assessment does not address changes in academic programs that have been made since 2005. In that time, 14 deans have been appointed, more than 400 new faculty members have been hired, and the University has seen a 33 percent increase in research funding.

ART JAHNKE

Your Brain on Yoga: Calmer, More Content

MED study: mood benefits edge out those of walking

Even the most mainstream psychiatrists might agree that yoga is like chicken soup—it can’t hurt. But researcher Chris Streeter has gone a step further toward validating yoga’s potential to help treat depression and anxiety. In a recent study published in the Journal of Alternative and Complementary Medicine, the School of Medicine assistant professor of psychiatry and neurology scanned the brains of yoga practitioners and found that compared with that age-old stress reliever, walking, yoga brings a greater improvement in mood and decrease in anxiety.

In Streeter’s 12-week study, 34 randomly selected physically and psychologically healthy young men and women were divided into two groups: one that walked for an hour three times a week and one that practiced Iyengar yoga for the same amount of time. At four-week intervals, Streeter used a technique known as magnetic resonance spectroscopy to monitor subjects’ levels of a brain chemical called gamma-amino butyric acid, or GABA, elevated levels of which are associated with improved mood and decreased anxiety.

She found that the yoga group reported a greater boost in mood than the walking group, with GABA levels matching those improvements. Although the role of GABA still isn’t completely understood, her study is the first to demonstrate the GABA-mood-yoga connection by looking at actual changes in the brain.

For Bostonia spoke with Streeter about the implications of the study and the future of yoga as a way of treating mood disorders.

**Bostonia: What is the main implication of this study?**

Streeter: This is the first study when we’re able to measure GABA’s relation to yoga. GABA is an important neurotransmitter, which is decreased in depressed people and increased in people who take so-called SSRIs (selective serotonin reuptake inhibitors), like Prozac, and it’s also implicated in anxiety disorders. It’s been reported for years that yoga helps people with depression and anxiety, but in this study we took people who didn’t have any experience with yoga and found that mood scales were higher in the yoga group, and so were GABA levels.

**Why did you choose Iyengar yoga?**

The beauty of Iyengar is that it’s been around for a long time and it’s pretty rigorous, with really well defined postures. There are variations in it, but as far as yoga goes, it’s as consistent as you can get. I had the subjects do mainly postures because I could see them actually doing it.

**Do you think yoga alone could be a viable treatment for anxiety or depression?**

It’s been suggested. I would say it’s not a substitute, but rather an adjunct to treatment. It’s an exciting behavioral intervention, but the results here are associative, not causal.

**Why did you decide to compare yoga to walking?**

You need a control group. There have been a number of studies comparing aerobic and nonaerobic exercise that show exercise helps ease depression and anxiety. In this study, the walking group clearly had more exercise, and they were very active people. But the yoga group had more improvement in their mood than the walking group.

**People might misinterpret these results to mean that yoga is better than walking. Can you clarify the comparison?**

In this study, in this population, walking didn’t prove to be as beneficial to mood as yoga. It doesn’t mean that yoga is better than walking in other populations and other situations.

SUSAN SELIGSON