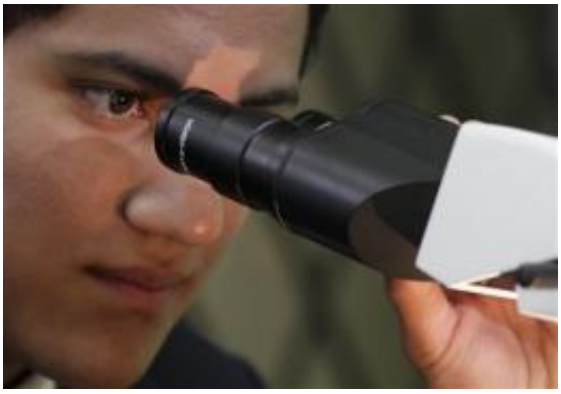
Ecuador's gambit: Study abroad, apply at home

July 13 2012, by FRANK BAJAK



In this photo taken on June 18, 2012, student Carlos looks through a microscope during a science lab class at Benalcazar High School in Quito, Ecuador. Carlos is one of the participants in a new program that aspires to convert this South American nation into a global competitor. In exchange for each state-paid year of school, the professionals guarantee to work at least two years back at home. Ecuador's President Rafael Correa isn't just bent on staunching brain drain, in which top-flight talent flees developing countries for lack of local opportunity. He's determined to reverse it, create a brain gain. (AP Photo/Dolores Ochoa) (AP Photo/Dolores Ochoa)

(AP) — Galo Guarderas is starting off on five years of study in Spain to make himself an expert in photovoltaics, a vital field for a world tapping into solar energy.

The price tag for the studies is more than $150,000. But the 47-year-old

professor of electrical engineering won't owe a cent for his doctorate.

His country, Ecuador, is footing the bill.

Guarderas is a pioneering participant in a new program that aspires to convert this small South American nation into a global competitor. In exchange for each state-paid year of school, the professionals guarantee to work at least two years back at home.

President Rafael Correa isn't just bent on staunching brain drain, in which talented people flee developing countries for lack of local opportunity. He's determined to reverse it, create a brain gain.

"Without human talent Ecuador won't advance," Correa said in a speech last month. "We lack the minimum critical mass of top-flight professionals needed to spur the country's development."

Ecuador's deputy minister of science and innovation, Hector Rodriguez, said the goal is "a radical transformation" from a country whose exports are 77 percent raw materials, chiefly oil, to one that exports technology.

"The best of the world's science is abroad and we ought to be taking advantage of that," he said.

The scholarships for professionals such as Guarderas will benefit as many as 2,000 Ecuadoreans this year, twice as many as last year and up eightfold from 2010.

The government will also pay as much as $250,000 to fund undergraduate education at the world's 50 top universities for secondary school graduates who pass a qualifying exam. The top qualifiers will get to choose their field of study. Others will have their specializations assigned.

Like the professionals, these scholars must give their country two years for every year of study that the government pays, and return home to work at jobs created for them at government-funded academies.

A third piece of the program imports talent already abroad. It has already recruited 100 mathematicians, physicists, chemists, biologists and other scientists, half of them Ecuadorean nationals and half foreigners.

Each gets a $6,000 monthly paycheck, and the government is reviewing an additional 1,500 applications from Spain, the United States and elsewhere.

"There's nothing happening like this anywhere else in Latin America," said Juan Ponce, president of Ecuador's branch of the Latin American Faculty of Social Science.

In this photo taken on June 20, 2012, student Maria Gabriela Onate, right, dances at "Frente de Danza" company in Quito, Ecuador. Onate is one of the participants in a new program that aspires to convert this South American nation into a global competitor. In exchange for each state-paid year of school, the professionals guarantee to work at least two years back at home. Ecuador's President Rafael Correa isn't just bent on staunching brain drain, in which top-flight talent flees developing countries for lack of local opportunity. He's

determined to reverse it, create a brain gain. (AP Photo/Dolores Ochoa)

International education experts say few programs anywhere address the greatest risk in government-funded study abroad: that scholars will renege on their commitment to return home because they've obtained higher-paying work in the developed world.

Allan Goodman, president of the New York-based nonprofit Institute of International Education, said that such programs often fall short because neither the government nor the local economy can provide satisfying jobs for the returning scholars.

"This seems to me to be different. There's real integration between education and labor in ways that I don't see in a lot of countries," said Goodman, a former Georgetown University School of Foreign Service dean. "It seems to me they read the playbook for best practices to make this work and they've adopted all of them."

In order to ensure that beneficiaries honor the agreement to return, they or relatives must sign contracts promising to repay if a student doesn't come back, or drops out, and putting up collateral such as a home. When students return home, they will be placed in jobs in universities and state institutions, generally teaching and doing research.

Guarderas, for example, said that after he gets his degree in Madrid, he expects to return to the state-run Army Polytechnic, where he taught before departing in February, and to use his new knowledge to expand the use of alternative energy:

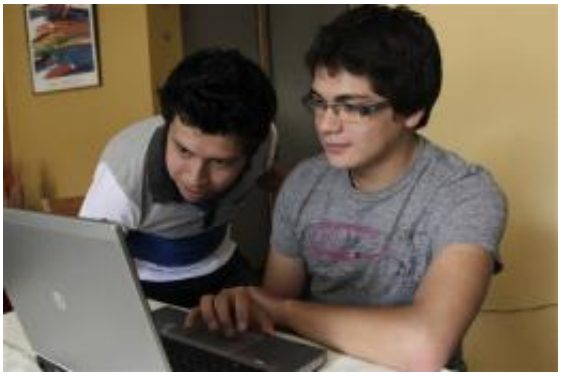
"Apart from whatever I'm assigned, I want to develop ... a private initiative to install photovoltaic cells on private homes, which in the long

term will mean allowing people to disconnect from the country's power grid."

Goodman said that the "Science Without Frontiers" program that neighboring Brazil announced last year is "the gold standard" in efforts to reverse brain drain. It is granting 100,000 scholarships for university study abroad, three-quarters of which will be paid by the state, the rest by the private sector.

Yet that program doesn't include job guarantees for beneficiaries. Nor does it specify any commitment to government service upon return.

Brazil's education minister, Aloizio Mercadante, told reporters recently that officials have no problem if some of the beneficiaries stay in the country where they study because that gives the government and scientific institutions contacts in those countries.



In this photo taken on Tuesday, June 19, students Bryan Polit, left, and Andres Jaramillo use a computer at Jaramillo's home in Quito, Ecuador. Polit and Jaramillo are two of the participants in a new program that aspires to convert this South American nation into a global competitor. In exchange for each state-paid year of school, the professionals guarantee to work at least two years back at home. Ecuador's President Rafael Correa isn't just bent on staunching brain drain, in which top-flight talent flees developing countries for lack of local opportunity. He's determined to reverse it, create a brain gain. (AP

Photo/Dolores Ochoa)

Correa, an economist, is himself a product of education abroad. He earned a master's degree from Lovain University in Belgium and a doctorate from the University of Illinois at Champaign-Urbana. Upon returning in 1999 to this nation of 14 million people he became a university professor and later economy minister. The presidency is his first elected office.

Correa is a polemical leader internationally, a leftist widely criticized for strong-arm tactics against a hostile press that he accuses of being a tool of oligarchs. He openly seeks to diminish Washington's influence in Latin America and cultivates such nations as Iran, Russia and China, the latter of which buys most of Ecuador's oil.

Yet Correa also leads Ecuador's most stable government since 1995. He enjoys an approval rating of more than 70 percent thanks to generous social spending, in which education is a priority, and will be up for re-election early next year.

His government's plan for reversing brain drain is not without critics.

Milton Luna, who directs an independent think tank known as the Social Contract for Education, said the initiatives "are making education increasingly more elitist."

"It's a message of lack of faith in Ecuadorean universities," he said, although the government says its initiative won't mean any less money for state universities. It isn't saying how much the new plan will cost.

For the undergraduate study-abroad program, 713 students were selected

from 154,000 who took the qualifying exam. If they don't wish to study abroad, the state will pay the full cost of university at home.

Juan Castro, 17, is one of the qualifying students, scoring 961 out of a possible 1,000 on the test. He's about to finish high school.

Castro has forever been fixated on understanding how things work. First he took toys apart, then he started in on household appliances.

"I didn't really care to watch television but I wanted to know how it worked. So I would study it and take it apart, though I wasn't always able to put it back together properly," he says, smiling.

His middle-class family could never afford to send him abroad, but now he's looking at alternatives in the United States, France and Canada.

"I want to be a robotics engineer or theoretical physicist. That's what attracts me a lot. I want to be a researcher. A theoretical physicist involved in research, in creating technology, in creating energy."

"Ecuador needs new sources of energy. I would love to discover some kind of alternative energy source that revolutionizes things."

Such ambitions are exactly what the program's creators seek.

Rodriguez, the science and technology deputy minister, says the object is to cure Ecuador of the "curse of abundance," the idea that oil wealth has encouraged countries to shun their own development while relying on imports financed by easy exports.

"We get almost everything we need with little effort."

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Associated Press writer Gonzalo Solano reported this story in Quito and Frank Bajak reported from Bogota, Colombia. AP writer Marco Sibaja in Brasilia, Brazil, contributed to this report.