# COSTA RICAN HIGHER EDUCATION, ITS UNIVERSITIES AND STUDENTS

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#### DEDICATION

This dissertation is dedicated to my father, Álvaro Castro-Harrigan: I thank him with all of my heart for teaching me that I can pursue my dreams and live the life I always imagined. I would also like to thank my mother, Vilma Montero, from whom I learned the true importance of assiduousness, organization, and sagacity. No achievement would have been possible without their wisdom, support, encouragement, and example. Last but not least, I would like to thank my sister Pam, who kindly lifted my burden at work while at school, and Frank, my loving partner, who always knew I could do it.

# ABSTRACT

#### COSTA RICAN HIGHER EDUCATION, ITS UNIVERSITIES, AND STUDENTS

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Multiple efforts have been undertaken around the world to describe and categorize universities and systems of higher education, in the understanding that knowledge about these institutions can inform interventions which can improve educational quality and efficiency, while helping consumers -- students, parents, employers, and governments -- make informed choices. Typologies are particularly vital in countries like Costa Rica, where little is known about the one-hundred and twenty institutions, give or take, that operate within its boundaries, and where issues regarding quality, access, and funding need to be addressed more assertively. This dissertation provides a systematic description of universities in Costa Rica and the students who enroll in them. In addition to establishing the groundwork for a general-purpose typology, it answers two research questions: Are there differences in the characteristics of universities by type? And are there any differences in the characteristics of students by institutional type? This study employed a mixed-methods approach. In the first stage of the study, information was collected on institutions using secondary research. Institutions were classified into seven categories, according to their type, and then compared. In the second stage, 1,138 undergraduate students at fifteen institutions were surveyed about their demographic background, socioeconomic status, academic preparation, and motives for college choice. The study confirmed that there are numerous differences in the characteristics of universities by type, beyond their size and nature of their programs, as well as differences in the characteristics of students by institutional type. The implications of these findings for public policy are discussed.

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## **INTRODUCTION**

Multiple efforts have been undertaken around the world to describe and categorize universities and systems of higher education, in the understanding that knowledge about these institutions can inform interventions to improve educational quality and efficiency, while helping consumers - students, parents, employers, and governments - make informed choices. Countries like the United States, Canada, Mexico, Chile, and Colombia already employ institutional classification systems, and the European Community is currently working on building one. Smaller countries like Costa Rica could also benefit from having a typology, as little is known about the 120 institutions of postsecondary education, give or take, that operate within its boundaries, and where issues regarding quality, access, and funding need to be addressed more assertively.

University managers, policy analysts, government officials, and researchers employ typologies for a number of valuable purposes. Take, for instance, the Carnegie Classification, the most institutionalized taxonomy in the world (McCormick & Zhao, 2005). When it was first introduced in 1973 by the Carnegie Foundation for the Advancement of Teaching, the intention was to compare and contrast institutions, while controlling for differences in institutional mission. The Carnegie Classification served as an instrument to study and recommend solutions to the issues facing higher education in the United States, but its use has now extended beyond academic research and policy analysis, to include all sorts of decision-making by educational institutions, state governments, foundations, membership organizations, publishers, accrediting agencies, legislators, faculty, and others (McCormick & Zhao, 2005).

In designing this typology, special care was taken to respect mission differentiation: institutions are grouped according to what institutions do, who teaches, and who attends them. In other words, the Carnegie Classification categorizes institutions according to the nature of their undergraduate and graduate instructional programs, enrollment profile and undergraduate profile, levels of community engagement, as well as size and setting<sup>1</sup>.

Typologies like the Carnegie Classification allow private and public institutions to make reasonable comparisons between similar higher education providers for strategic planning and benchmarking purposes. From the standpoint of private institutions, the expansion and diversification of the higher education market requires leaders to be smarter about the ways in which they recruit and retain their students. The number and diversity of education providers have grown exponentially over the last three decades due to the expansion of enrollments, restrictions in public funding, the need for increasingly specialized training opportunities, improvements in distance learning technologies, and the internationalization of educational markets (Knight, 2005). Increased competition has led institutions to rethink their missions and institutional priorities (Kirp, 2003; Litten, 1980).

As they seek to differentiate their offerings and grow more competitive, private institutions can employ institutional typologies to understand how the higher education market is structured, as well as their place in it. They can clarify their missions and build their desired profiles. Institutions can also decide, more prudently, with whom to establish inter-institutional and inter-industry partnerships or form consortia with other universities, for the development of joint-degree programs, benchmarking, and the mobility of students, faculty, programs, and projects (Van Vught et al., 2005). In sum, they can design their offerings, seek growth opportunities, and add value to their stakeholders, while not losing sight of their institutional purposes (Chaffee, 1984).

For many of the reasons stated above, public universities can also benefit from using an institutional classification system. For instance, they can anticipate emerging

<sup>&</sup>lt;sup>1</sup> The specific criteria that are considered by the Carnegie Classification are found on The Carnegie Foundation for the Advancement of Teaching website, at http://classifications.carnegiefoundation.org/lookup\_listings/custom.php

opportunities for competitive advantage, diversify their offerings, or strengthen their identity. Despite government funding, a significant and growing percentage of their revenue will come from student enrollment fees as well as the commercialization of research and consulting services. Institutions can also use an institutional typology as a market segmentation instrument, to plan for new ventures and increase their awareness of societal needs, and thus reduce the strategic risks involved in decisions like opening new campus locations, programs, or services (Rindfleish, 2003). Like private institutions, public universities can use valuable information from a taxonomy to make sure their programs and services respond to students' and employers' expectations, to recruit a more diverse or talented group of students, or to enhance their institutional prestige.

At the macro-organizational level, the international credibility gained from the existence of a classification of institutions of higher education could eventually lead to the recognition of qualifications; compatibility, coherence, and cooperation between educational systems; and greater mobility of students to and from the country, through degree recognition, quality assurance, and credit transfer (Van Vught et al., 2005). Improvements in the international competitiveness of higher education systems would likely foster new cross- border education opportunities, which would generate valuable academic, political, social, and economic benefits for the countries involved (Vicent-Lancrin, 2008).

Taxonomies also help researchers and policy-makers evaluate institutions and systems with the purpose of increasing the levels of transparency and performance. By classifying institutions, government officials are able to target policy instruments more effectively, while researchers and other experts in policy and institutional analysis can gain more insight into the workings of universities and colleges. Lastly, students and parents can use classification systems to select an institution in which to enroll with the programs, services, and characteristics they seek (Van Vught, et al., 2005).

Creating a typology is important in Costa Rica because it would provide valuable information about a postsecondary education system that is filled with numerous, diverse, and largely unknown institutions. The country is renowned in Latin America for its unwavering commitment to education. However, in the past thirty years, demographic trends have expanded and diversified the higher education landscape. The college student population increased twelve-fold, from 12,913 students in 1970, to approximately 157,053 students in 2007 (Consejo Nacional de Rectores, 2008). Just from 2004 to 2007, the demand for higher education increased by 19% (Consejo Nacional de Rectores, 2008). Furthermore, global developments such as the growing importance of the knowledge economy, the surge of trade and regional trade agreements, the influx of foreign direct investment, the advent of technological innovations and infrastructure in the field of communications, and the prominence of the market economy, have dramatically transformed Costa Rican tertiary education.

In less than twenty years, institutions and campus locations mushroomed around the country. The Universidad de Costa Rica was the only university in the country for over thirty years, until another three public universities and the first private university were founded in the 1970s. A decade later, seven private universities were created, and from 1992 to 2001, the number of institutions burgeoned, adding another 42 new private universities to the system (Ruiz, 2001). Campus branches grew all over the country, from 15 in 1976 (Consejo Nacional de Rectores, 2008) to 187 in 2010. Several technical schools founded in the first half of the twentieth century developed into *parauniversitarias*, institutions modeled after the community college system in the United States. Four public *parauniversitarias* were created in the 1970s, one in the 1980s, and another two in the 1990s. The first private *parauniversitaria* began to operate in 1968, and the others in the 1980s and 1990s (Consejo Superior de Educación, 2008). In sum, only one public university and a few vocational schools operated in the 1940s, but in 2010, the number and variety of institutions ascended to 5 public and 50 local private universities, 6 international universities, as well as 7 public and 52 private *parauniversitarias*.

Postsecondary institutions in Costa Rica are not only numerous; they are diverse. Institutions of higher education come in all sizes; public and private; for-profit and non-profit; national and international; comprehensive and specialized; urban and rural; faith-related and secular. In the past ten years, Costa Rica has witnessed the arrival of multinational education providers, corporate universities, and media companies, as well as new modes of educational delivery, including hybrid and online education (Estrada, 2004). With increasing international mobility, institutions and programs have become more heterogeneous. As greater emphasis is placed on lifelong learning, the demand for higher education intensifies, and so hundreds of commercial providers offer continuing education and technical skill development and certification opportunities. These institutions, as well as scores of private vocational schools, language academies, and even professional associations, vie for a share of the postsecondary education market.

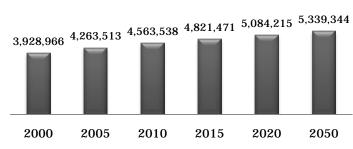
The diversity of the higher education system must be protected, but also understood, with the purpose of improving educational quality and attainment. Stadtman (1980) explains that diversity is desirable because a system with a broad variety of institutions provides a wider array of learning options for students. More diversity affords the system greater ability to adapt to students' needs. Additionally, the system can respond more flexibly to society's ever-changing demands and can make it more difficult for a central authority to use higher education as a tool for indoctrination. Greater diversity often also means more cost-effectiveness. For all of these reasons, the creation of institutional typologies must help understand, but also preserve, institutional diversity (Van Vught, et al., 2005).

The creation of an institutional typology in Costa Rica is urgent, as information about the characteristics of private and public institutions, and about the students who enroll in them, is scant, unreliable, or simply non-existent. Research is scarce because no public or private entity systematically collects, analyzes, verifies, and makes data publicly available on the entire postsecondary market; the Consejo Nacional de Rectores (CONARE), the coordinating board for public universities, periodically collects some data from public institutions, but not much is known about private higher education. The government-sponsored *Estado de la Educación Costarricense* publications are the only current reports available on the state of higher education. Surprisingly, the only reliable statistic from private universities and *parauniversitarias* that has been published thus far is the number and type of degrees they have awarded, by year.

A typology in Costa Rica must be designed to help policy makers and institutional leaders invest wisely in the knowledge economy and an educated citizenry. A national strategy in this regard would result in private and public rates of return. The benefits to individuals would include an improved quality of life: higher earnings and savings, access to health and retirement benefits, safer and more comfortable working environments, increased health and life expectancy, personal status, leisure time, and opportunities for their children. But society as a whole would also benefit from more financial investments, tax revenue, increased consumption, and increased workforce flexibility, while relying less on government support. Studies also show that college-educated citizens are less likely to commit and be convicted of crimes, are more likely to volunteer, donate to charity, assume civic activities such as voting, and adapt to technological changes (Black & Smith, 2004; Card, 1999; Ehrenberg, 2004; Institute for Higher Education Policy, 1998; Monks, 2000; Organization for Economic Co-Operation and Development, 2007).

In a globalized, knowledge-based economy that relies on highly-skilled, entrepreneurial, and civically-responsive college graduates to create more and better jobs, products, and services, moving Costa Rican high school graduates through the postsecondary educational pipeline is of the essence, as low educational attainment figures in higher education limit Costa Rica's possibilities for significant economic advancement: only 9.3% of the total population has a college degree (Consejo Nacional de Rectores, 2008) when OECD countries average 28% (Organization for Economic Co-Operation and Development, 2009). Furthermore, the absence of human capital in STEM fields (science, technology, engineering, and mathematics) and in other strategic disciplines, constrains the country's ability to compete in a knowledge-based global society. In 2007, only 13% of the university diplomas were awarded in the fields of engineering and the basic sciences (Ministerio de Ciencia y Tecnología, 2008). Moreover, less than 1% of the degrees were awarded in graduate programs (CONARE, 2008). For that reason, government and business leaders declared attainment in tertiary education a national priority (Consejo Nacional de Competitividad, 2007).

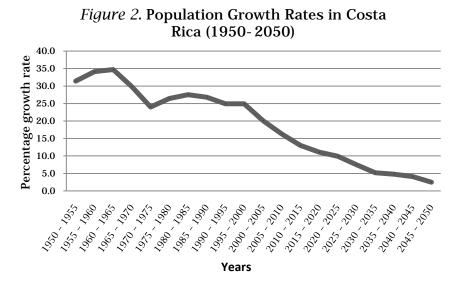
From the standpoint of public policy, improving educational attainment is a difficult undertaking. Costa Rica's long-standing commitment to free primary and secondary education, as well as considerable improvements in high school completion rates, a rising awareness of college education as a public good with positive externalities, and a clearer understanding of the importance of higher education for national development and innovation in its knowledge disseminating and producing function, have generated a massive demand for higher education. What is more, educational enrollments are expected to increase, as a consequence of demographic trends (Figure 1). With 4,509,290 inhabitants, birth rates of 17.47%, death rates of 4.34%, and net immigration rates of 0.47%, the population size is expected to grow, albeit moderately. In 2008, the population increased 1.35% (Instituto Nacional de Estadística y Censos, 2009).



*Figure 1.* Population Growth Projections 2000-2050

Source: Instituto Nacional de Estadística y Censos (2009)

Between 2008 and 2025, the population is expected to grow approximately 42%, but growth rates are expected to decline in the next forty years (Figure 2).



Source: Instituto Nacional de Estadística y Censos (2008)

Thus, significant increases in educational attainment at the tertiary level will not come from natural population growth patterns alone. Achieving more with less is not easy: an ambitious, realistic, and coherent policy framework must be implemented to sustain and expand educational attainment figures. To be effective, these policies need to take into consideration the missions and characteristics, possibilities, and limitations of the institutions that comprise the postsecondary system. Taxonomies provide the solution to managing knowledge on the system and ease the access to pertinent information. Taxonomies are typically built by teams of experts who work with key stakeholders in the definition of the indicators that will be used to conduct the comparisons. The indicators are standardized and weighted, and the sources of information defined. Institutions submit the required data, which are then verified by reputable auditors. The results are then published periodically and the raw data is made publicly available for research and policy analysis, in a database much like the Integrated Postsecondary Education Data System (IPEDS) in the United States.

In light of the critical absence of national data, this dissertation set out to establish the groundwork for the first typology of universities in Costa Rica, using only the information that is publicly available. This systematic description answers two research questions: Are there differences in the characteristics of universities by type? And are there any differences in the characteristics of students by institutional type?

In the first stage of the study, data was collected on institutions using secondary research. Institutions were classified into seven categories, according to their size and the nature of their programs, and then compared. The methods employed and findings are presented in chapter 2. In the second stage of the study, 1,138 undergraduate students at 15 institutions were surveyed about their demographic background, socioeconomic status, academic preparation, and motives for college choice. The methods and the findings of this stage of the study are presented in chapter 3. The dissertation begins with an overview of the Costa Rican higher education landscape and concludes discussing the implications of the findings of the study for public policy.

### CHAPTER 1. HIGHER EDUCATION INSTITUTIONS IN CONTEXT

Institutions of higher education in Costa Rica need to be understood in light of the context in which they operate, and the context can be analyzed from any number of valid perspectives. In this study, the methodology chosen to describe the higher education milieu is the one employed by the National Center for Public Policy and Higher Education in the United States, which uses the *Measuring Up* report cards to assess the performance of state systems in providing Americans with education and training at the postsecondary level (The National Center for Public Policy and Higher Education, 2008). *Measuring Up* evaluates six main criteria: preparation, participation, affordability, completion, benefits, and learning.

Preparation determines the extent to which traditional young adult students are minimally qualified to participate in higher education. Indicators include high school completion rates of 18 to 24 year- olds, but also the courses taken by 8th, 9th, and 12th graders in upper-level math and science courses, and student achievement on national assessments exams in math, reading, science, and writing. Teacher quality is measured by the number of 7th to 12th graders taught by teachers with a major in their subject.

The second criterion, participation, refers to the opportunities that are made available to citizens to enroll in postsecondary education. The primary indicators are the number of 18 to 24 year- olds who are enrolled in higher education, and the number of 25- to 49- year- olds who are enrolled in any type of postsecondary education with no bachelor's degree or higher.

To assess completion, the *Measuring Up* framework uses two main indicators: persistence from the first to the second year of college, and the completion of certificates and degrees in a timely manner. Six years are defined as a reasonable period for degree completion of bachelor degrees.

Affordability is assessed using three measures: the students' and families' ability to pay for college, given the type of institution they attend, the financial aid they receive, and their income constraints; the amount of need-based grant assistance they receive to off-set expenses; and the loan burden associated with their higher education expenses. The family's ability to pay is estimated as a percent of income needed to pay for college minus financial aid. With reference to the reliance on loans, *Measuring Up* estimates the average loan amount that undergraduate students borrow each year.

Lastly, learning refers to three indicators: the abilities of the college-educated population; the college and university contributions to educational capital through licensure examinations; and the abilities of college graduates on academic tasks and real-world problem situations. The performance of college graduates is assessed in the United States through the Collegiate Learning Assessment (CLA) for four-year students and the ACT WorkKeys assessment for two-year students.

In this study, the *Measuring Up* methodology has been adapted to reflect the indicators and data sources that are available in the country. The criterion labeled "benefits" has not been included in this study, since nearly all of the data pertaining to it is altogether unavailable and there are no adequate proxies for those indicators. "Benefits" includes indicators such as adult skill levels, rates of volunteerism or charitable gift-giving, and the increase in the total personal income as a result of the percentage of the population holding bachelor degrees or some college education.

## Preparation

#### High school completion rates

Information regarding high school completion rates in Costa Rica is collected by the Instituto Nacional de Estadística y Censos (INEC) and by the Ministry of Education. The INEC surveys family households yearly and publishes its results online, while the statistics generated by the Ministry of Education are not publicly available, and only appear occasionally in the *Estado de la Educación Costarricense* and other governmentsponsored reports. The last *Estado de la Educación Costarricense* states that 35.1% of the population has at least a high school diploma (Consejo Nacional de Rectores, 2008). However, a recent report published by INEC indicates that only 25.71% has at least a high school diploma (Table 1). Fifty point seventy-seven percent were awarded to women and 49.23% to men, suggesting true gender equity in education (Instituto Nacional de Estadística y Censos, 2008).

	TOTAL	
Level of degree	REL	ABS
Total	100.00%	4,191,945
Without high school diploma	74.29%	3,114,314
With high school diploma	25.71%	1,077,631
	WOMEN	
Level of degree	REL	ABS
Total	50.77%	2,128,347
Without high school diploma	72.70%	1,547,227
With high school diploma	27.30%	581,120
	MEN	
Level of degree	REL	ABS
Total	49.23%	2,063,598
Without high school diploma	75.94%	1,567,087
With high school diploma	24.06%	496,511

**Table 1.***Costa Rican Population with a High School Diploma* 

Source: Instituto Nacional de Estadísticas y Censos (2008)

Neither report provides an estimate of the total number of *young* adults with a high school diploma, only adults. However, the last national census, published by INEC in June of 2000, indicates that 57.20% of 15 to 19 year-olds, and 56.69% of 18-24 year-olds had high school degrees (Table 2).

#### Table 2.

	Ages	
Level of degree	15 to 19 ye	ars old
Without high school degree	42.80%	167,818
With high school degree	57.20%	224,245
Academic high school	46.63%	182,817
Technical high school	5.57%	21,855
Parauniversitaria	0.80%	3,134
University	4.19%	16,439
Total		392,063
		Δ.
		Ages
Level of degree	20 to 24 ye	ars old
Without high school degree	43.81%	150,152
With high school degree	56.19%	192,576
Academic high school	31.14%	106,730
Technical high school	4.14%	14,182
Parauniversitaria	2.46%	8,425
University	18.45%	63,239
Total		342,728

Highest Academic Degree of Young Adults in Costa Rica

Source: Instituto Nacional de Estadística y Censos (2000)

The discrepancy between the *Estado de la Educación Costarricense* report and the INEC report is explainable, as each uses different sources of information. However, it is difficult to assess which is the more dependable figure, as there are no technical reports available that specify they way in which the statistics were generated by the Ministry of Education. What is more, INEC figures might be unreliable, for the same reason that the publishers of the *Estado de la Educación Costarricense* revealed in their last report: since 2003, the surveys have significantly overestimated the number of people enrolled in public universities, a situation which was discovered when comparing the census results to the administrative records at these institutions (Consejo Nacional de Rectores, 2008). Regardless of the figure that is preferred, 25.71% or 35.1%, Costa Rica's modest performance in the attainment of high school diplomas can be better appreciated when comparing it to the performance of OECD countries in the same measure (Table 3). Only the lowest performing countries - Mexico, Portugal, and Turkey - share similar high school graduation rates.

# Table 3.

	Percentage by Age Group
	25 to 64
Czech Republic	91
Estonia	89
Russian Federation	88
United States	88
Slovak Republic	87
Canada	87
Poland	86
Switzerland	86
Sweden	85
Germany	84
Slovenia	82
Finland	81
Israel	80
Austria	80
Hungary	79
Norway	79
Korea	78
Denmark	75
Netherlands	73
New Zealand	72
France	69
United Kingdom	68
Australia	68
Belgium	68
Ireland	68
Luxembourg	66
Iceland	65
Greece	60
Italy	52
Spain	51
Chile	50
Brazil	37
Mexico	33
Turkey	29
Portugal	27
Source: Organization for Economic Cooperat	tion and Development (2009)

*Population that has Attained at Least Upper Secondary Education in OECD and Partner Countries* 

# High School Instruction in Math and Science

Costa Rica's secondary school system offers a total of five years of instruction in public academic high schools and six years in public technical schools. With regard to the number of 8th, 9th, and 12th graders which have taken upper-level math and science courses, public schools in Costa Rica teach a shallow, fragmented, homogenous, rigid, and time-constrained curriculum. Thus, students are not awarded the opportunity to take upper-level courses in any field, despite their interests and abilities. Since 91.3% of students are enrolled in public education, it is reasonable to state that most students in Costa Rica do not take upper-level math and science courses, like algebra in the 8th grade or calculus, second year chemistry, biology, or physics in the eleventh grade. Some private middle and high schools offer students honors and advanced placement options, but no data has been systematically collected and made publicly available.

To enhance math and science instruction, the government created the first scientific high schools in 1989, and in the last twenty years, expanded the number to nine. All of these schools are run by four public universities. The Ministry of Education pays teacher salaries, but the universities select a program director and teaching staff, and provide the learning community with access to libraries and laboratories. Each school teaches one 10th grade class and one 11th grade class of 25 students each (Minero-Torres, n.d.). The selectivity rate in these programs is 25%, a factor which undoubtedly contributes to the positive results. According to the Minister of Science and Technology, Eugenia Flores, 100% of the graduates pass the baccalaureate examinations and enroll in scientific and technological fields at the college level (Flores, 2009). Unfortunately, the scientific schools only serve a total of 450 students, a negligible number when over 70,000 other learners are enrolled in the tenth and eleventh grades in regular high schools (Villegas, 2008).

The learning and teaching of mathematics and science in regular public schools is beleaguered with problems caused by ineffective public policy, inadequate financial investments, and low teaching productivity. Conclusions at one of the national symposia on math and science are telling: attractive candidates are dissuaded from becoming educators in these fields, due to the meager salaries that are offered, the lack of performance incentives, poor working conditions, little prestige, and limited availability of professional development opportunities. Thus, the supply of teachers is scarce and the Ministry is forced to hire candidates who are not the better qualified and do not have the resources or motivation to benefit from high quality teacher training opportunities (Programa de Investigaciones Meta Matemáticas, 2007).

Problems with math and science instruction also result from teacher education, which is characterized by low standards and the inadequate learning of subject matter. Furthermore, 25% of educators do not have degrees in the subject areas they teach (Villegas, 2008). The lack of training means that they are likely to use inappropriate teaching methods and pass on their fear of math and science to their students (Programa de Investigaciones Meta Matemáticas, 2007).

The curriculum is unattractive, poorly structured, and taught in an insufficient number of hours. The situation is compounded by rundown physical facilities, inappropriate supervisory practices, and excessive teacher absenteeism (Programa de Investigaciones Meta Matemáticas, 2007). All of these factors, along with the unavailability of educational resources for students and teachers, such as books, labs, and other teaching materials, contributes to the low learning outcomes of students (Programa de Investigaciones Meta Matemáticas, 2007). It is no surprise that *Proyecto Estrategia Siglo XXI's* report on the state of science and technology in Costa Rica urges government officials to support math and science education (2006).

#### Student Achievement on National Assessments

Student achievement is currently assessed, at the national level, with high-stakes examinations in the 11th grade, required to obtain the high school credential. Until 2007, high-stakes tests were also used in the sixth and ninth grades. To graduate from high school, 11th graders must pass six exams with a 65% in the following subject areas: Math, Foreign Language (English or French), Science (Biology, Physics, or Chemistry), Social Studies, Spanish, and Civic Education. Assessment instruments are contentbased, not competency-based, so students and teachers spend their class time rehearsing the questions and answers to multiple-choice items, instead of learning important skills like reading, writing, speaking, critical thinking, or quantitative This is one of the reasons why the Ministry of Education decided to reasoning. eliminate high-stakes examinations in the 6th and 9th grades in 2008 and instead employ international diagnostic tests such as the Program for International Student Assessment (PISA), the Third International Mathematics and Science Study (TIMMS), and the LLECE, organized by UNESCO's Laboratorio Latinoamericano de Evaluación de la Calidad de la Educación. In the SERCE, an international assessment effort organized by LLECE, Costa Rican children in the third and sixth grades scored above average in math, along with countries like Chile, México, and Uruguay. The scores of third and sixth graders were also above average in reading, along with countries like Argentina, Chile, Colombia, Costa Rica, México, and Uruguay. Boys scored much higher in math than girls, and girls scored higher in reading than boys. There were also important differences among the math scores obtained at rural and urban schools (Oficina Regional de Educación de la UNESCO para América Latina y el Caribe, 2008).

Scores on the 11th grade achievement tests are not very revealing, as student performance cannot be benchmarked internationally or even over time (CONARE, 2008). However, a report for UNESCO on the results of achievement tests in Latin America, including Costa Rica's, states that overall learning achievement in Latin America is poor, with worse results in lower secondary than in primary school, and worse results in mathematics than in language. Learning results have remained constant over time (Murillo, 2007).

Pass rates on the achievement exams generally decreased in the last three years: students improved substantially in math and French, but remained the same or worse in all other subject areas (Table 4). Test results demonstrate that high school graduates are comparatively weak in mathematics and science. Regional disparities are also evident: the worst scores were obtained in poor rural communities like Upala, Santa Cruz, and Limón (Consejo Nacional de Rectores, 2008).

Subject	2006	2009
Civic Education	95.7	94.4
French	96.4	92.92
Social Studies	94.4	92.35
Biology	87.2	91.67
Spanish	96	91.33
English	86	86.84
Physics	86.4	86.67
Chemistry	86.1	85.25
Mathematics	72.2	81.75

Table 4.Passing Rates on National Assessments

Source: Ministry of Education (2009)

Sixty-eight percent of high school students passed all of their achievement exams in 2009, the highest results reported since 1996. In 2008, only 64.59% of high school students passed their achievement exams, which means that 3.88% more students graduated from high school in just one year. With no hard evidence, the reasons awarded by government officials for the sudden improvement are speculative.

#### Teacher quality

In Costa Rica, teachers are currently required by the Civil Service to obtain subject-area education degrees at the undergraduate level. However, the number of high school students who are taught by teachers with a major in their subject is uncertain. The *Estado de la Educación Costarricense* reports that, in 2005, 20% of the teaching positions available in public primary and secondary schools could not be filled, due to the lack of qualified candidates. The problem is sharpest at the primary school level, were 6% of teachers do not even have bachelor's degrees. Curiously, the problem is not necessarily related to the absence of graduates in the field, as more college degrees are awarded in the fields of education than in any other discipline (Consejo Nacional de Rectores, 2008). The absence of teachers with majors in their subject might have more to do with the nepotistic practices at the Ministry of Education of doling out tenured positions to political supporters, despite their lack of qualifications (Villegas, 2008). Early in 2010, the problems regarding teacher appointments had not been resolved (Mata, 2010). In sum, the crisis in teacher quality cannot be attributed exclusively to degree attainment alone; the problems in math and science instruction described earlier translate to other subject areas as well.

# Participation

In Costa Rica, available statistics do not distinguish full-time enrollment from part-time enrollment at private institutions of higher education. Full-time enrollment at public institutions is estimated at 10-20% of the total higher education student population (Centro Interuniversitario de Desarrollo, 2007). In 2006, UNESCO estimated Costa Rica's participation rate at 43.3% using 2003 data, by dividing the gross enrollment in higher education over the number of students aged 20 to 24 (Table 5). Costa Rica's participation rate in that study appears higher than the average in Latin America and the world, but much lower than in developed countries in North America and Europe. In Latin America, only Argentina (60%), Panama (50.5%), and Chile (46.20%) reported higher participation rates than Costa Rica (Instituto Internacional para la Educación Superior en América Latina y el Caribe, 2006).

	2000	2002	2003	2004	2005	2006
North America	68.10	78.50	80.10	80.20	80.40	79.90
Europe	49.20	55.30	58.00	60.30	61.90	63.20
Latin America & Caribbean	22.50	25.70	27.20	28.80	30.10	31.30
World	18.70	21.30	22.40	23.30	24.10	24.70
Other countries/areas	17.10	18.30	19.30	20.50	20.90	21.40
Asia and the Pacific	13.00	15.70	17.00	17.90	19.00	19.80
Africa	8.20	8.40	8.40	8.90	9.20	9.20

Table 5.World Gross Enrollment Ratio in Tertiary Education

Source: UNESCO Institute for Statistics, Data Centre (2008)

However, enrollment figures for Costa Rica seem to have been overestimated in the previous study. Current projections estimate gross enrollments in tertiary education at 157,053 people, not 170,043. If the gross enrollment rate had been estimated using the more accurate projections over the number of students in the official school age, 18 to 24, Costa Rica's gross enrollment rate in 2006 would have been roughly 26%, which coincides with UNESCO's most recent data on enrollment rates. Note that enrollment rates of females increased at a higher rate than the enrollment rate of males from 1999 to 2005 (Table 6). In the last year of the study, 2005, female enrollment was 5% higher than male enrollment. Table 6.

Improvements in Gross Enrollment Rates in Tertiary Education in Costa Rica, by Gender

Genuer		
Year	Subgroup	Percentage
1999	Female	17
	Male	15
2000	Female	18
	Male	15
2001	Female	22
	Male	19
2002	Female	20
	Male	18
2003	Female	20
	Male	18
2004	Female	28
	Male	23
2005	Female	28
	Male	23

Source: UNESCO (2007)

Costa Rica's gross enrollment rate of 26% is particularly low, in contrast to upper middle income countries, which average 42.4%, and even when compared to other countries in Latin America and the Caribbean, which average 34.3% (World Bank, 2009). To further exemplify the problem with the gross enrollment rate in Costa Rica, the enrollment figures of OECD countries are provided (Table 7). The gross enrollment rate in tertiary education in OECD countries averages 50%, while Costa Rica's participation rate is similar to that of China or the Phillipines: 26%. Table 7.

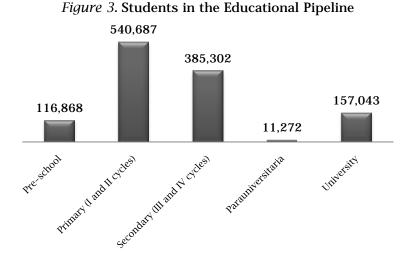
Gross Enrollment Ratio at
Tertiary Level in OECD
Countries (2007)

countries (2007)	
Country	Ratio
Republic of Korea	95
United States	82
New Zealand	80
Australia	75
United Kingdom	59
Japan	58
France	56
Thailand	50
Switzerland	47
Hong Kong SAR	34
Malaysia (2006 data)	30
Philippines (2006 data)	28
China	23
Indonesia	17
India (2006 data)	12

*Source:* Organisation for Economic Cooperation and Development (2008)

Low persistence and completion rates in secondary education contribute to low participation rates in higher education. In 2006, while the primary gross enrollment rate was 108.4%<sup>2</sup>, the secondary gross enrollment rate dropped to 87.9%. Interestingly, the gross enrollment rate in the III cycle (grades 7 to 9) was 103.6% but in the diversified education cycle (grades 10 to 12), enrollment plummeted to 65.2% (Consejo Nacional de Rectores, 2008). Furthermore, enrollment at two-year colleges, or *parauniversitarias*, is dramatically lower than at four-year colleges (Figure 3).

 $<sup>^2</sup>$  The enrollment rates over 100% indicate that many children in primary school are above the official school age. While this statistic signals high access and participation, it also indicates inefficiency due to high rates of repetition and reentry.



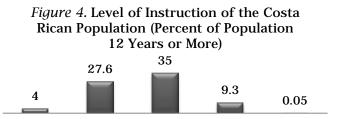
Source: CONARE (2008) and Mora (2006). Note: Data on enrollment in parauniversitarias is based on 2003 data. All other figures are based on 2006 data.

The total student population at public and private *parauniversitarias* declined 47% in just 5 years. From 1998 to 2003, the population decreased from 21,369 students to 11,272. Ninety-eight percent of the loss was experienced in the private sector. As a result, 38 out of 59 private *parauniversitarias* are inactive (Mora, 2006). Mora (2006) hypothesized that this trend could be explained by students' predilection for university degrees over *parauniversitaria* degrees, an argument that does not explain why the preferences of students in the private sector changed so dramatically in just 5 years.

An alternative hypothesis is that, until 2005, private universities were not allowed, by law, to recognize credits obtained at private *parauniversitarias*, and public universities rejected students from both public and private *parauniversitarias* on the grounds of their lack of academic preparation. Restrictions to student transfer were relentlessly enforced during the period: transfers into private universities were being refused for graduation by the Consejo Nacional de Enseñanza Superior Universitaria Privada (CONESUP), the regulatory authority for private universities. To make matters worse, students who had been able to transfer credits from private *parauniversitarias* into private universities and had graduated, were also being rejected for incorporation into professional associations. Even representatives of SINAES, the national accreditation agency, frowned upon programs which recognized credits obtained at private *parauniversitarias*. These occurrences deteriorated the prestige of the *parauniversitaria* sector, to the point where it practically made private *parauniversitarias* disappear, while motivating public *parauniversitarias* to constitute their own university to survive.

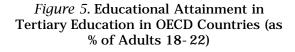
#### Completion

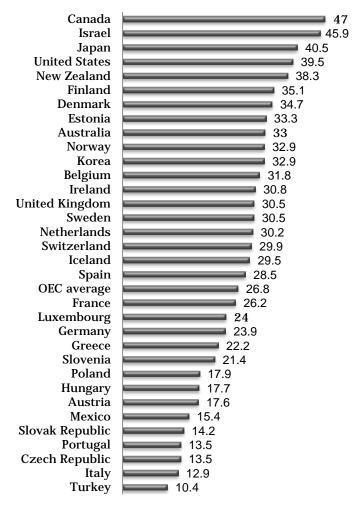
No information is available regarding the persistence rates from the first to the second year at public or private universities in Costa Rica. With regards to degree completion, 14.25% of the Costa Rican population (Figure 4) has completed one or several years of higher education and 9.3% has obtained at least one degree, according to the *Estado de la Educación Costarricense* report (Consejo Nacional de Rectores, 2008). 52.4% of the degrees were awarded to women (INEC, 2008), but three times more men than women graduated in the fields of engineering and basic sciences (Brenes, 2003). Less than 1% of the degrees were awarded at the graduate level. The INEC (2008) estimates that less than 1% of the total population has *parauniversitaria* degrees, an inconsequential percentage in comparison to the number of *parauniversitaria* institutions authorized to operate: 59. Attainment in Costa Rican tertiary education are estimated at 10% (Donoso & Schiefelbein, 2004). When comparing degree completion to OECD countries, Costa Rica ranks below the average of 27.42%, alongside Turkey, and lower than the Slovak Republic, Mexico, Italy, and Portugal (Figure 5).



Without Completed Completed Completed Ignored Instruction Primary Secondary Bachelor or Higher

Source: CONARE (2008)





Source: Organization for Economic Cooperation and Development (2009)

No official reports have been published with data regarding the graduation rates at private universities, but several studies are available from public universities. In one of the studies, a cohort of 13,807 students who entered public universities in 1996 was tracked. Only 25% had graduated six years later, 13% were still in school, and 62% had deserted. A total of 42% of the drop- outs transferred to private universities (Oficina de Planificación de la Educación Superior, 2005).

Aware of the unavailability of data, another study divided the number of admitted students by the number of students who graduated four years later as a proxy for graduation rates. From 2000 to 2004, the graduation rate was 48%. Women graduated at a faster rate than men (51% versus 39%). Two private universities were included in the study, and their graduation rate averaged 70%, suggesting greater levels of efficiency. Students who enrolled in high demand programs such as Medicine, Law, and the Social Sciences, graduated faster than students in the humanities or agricultural studies (Brenes, 2005).

The institutional factors associated with attrition at public universities in Costa Rica, according to the same study, include the rigid structure of the programs of study; the lack of availability of courses in the offering; the great number of part-time students who do not have the time to engage academically and socially; the unavailability of enrollment slots in high demand programs; the high failing rates in certain courses; and other conditions related to the faculty, including their lack of academic preparation, teacher training, and genuine interest in teaching. On the other hand, the student factors associated with attrition include their socio-demographic background, their indecision with regard to career preferences; and their deficient academic skills. Family responsibilities, work responsibilities, income levels, and the educational level of their parents were all considered a component of their socio-demographic background (Brenes, 2005).

### Affordability

Citizens and foreign nationals who want to attend a public university must pay tuition and fees, unless they have a scholarship. The costs of enrolling at a public institution vary, as the number of credits vary from one program to the next: for instance, bachelor programs have 120 to 144 credits, and licenciatura programs, 30 to 36 credits (Consejo Nacional de Rectores, 2004). What is more, all public institutions, except the Universidad Nacional a Distancia (UNED), charge different tuition fees per credit; the UNED charges tuition fees per course. Table 8 provides an estimate of the tuition for undergraduate programs at public institutions in 2009.

To estimate the cost of an entire undergraduate program, the cost of a term was arbitrarily set at 12 credits, since public universities do not charge additional fees beyond the twelfth credit and no information is publicly available on the number of credits students enroll per term. Thus, the cost of tuition at the Universidad de Costa Rica for a twelve-credit term is ¢125,400, making it the most expensive public university in the country. The Universidad Nacional charges the least: ¢87, 456. The average tuition cost at public universities is ¢108,594 per term. To complete a 120credit bachelor degree, students would have to enroll ten terms, and spend an average of ¢1,085,940, assuming that they did not fail any of their courses and that tuition costs remain fixed for the duration of the program<sup>3</sup>. In a 144-credit program, students would have to enroll twelve terms, and pay an average of ¢1,303,128. Three out of four institutions charge international students higher tuition fees: the Instituto Tecnológico de Costa Rica is the exception.

<sup>&</sup>lt;sup>3</sup> To simplify the analysis of the total cost of a bachelor's degree at a public university, additional fees, such as the fee charged for the entrance examination, enrollment, labs, student affairs, and others, were not included, as the author does not consider that other fees would vary the results in any significant way.

Public University	Tuition per credit in bachelor programs	
	Citizens	International
Universidad de Costa Rica	¢10,450.00	¢38,060.00
Instituto Tecnológico de Costa Rica	¢8,960.00	Ø8,960.00
Universidad Nacional	¢7,288.00	¢14,576.00
Universidad Estatal a Distancia*	¢28,500.00	¢42,750.00
	Tuition for a 120-credit bachelor degree (or forty courses)	
	Citizens	International
Universidad de Costa Rica	¢1,254,000.00	¢4,567,200.00
Instituto Tecnológico de Costa Rica	¢1,075,200.00	¢1,075,200.00
Universidad Nacional	¢874,560.00	¢1,749,120.00
Universidad Estatal a Distancia	¢1,140,000.00	¢1,710,000.00
	Tuition for a 144-credit bachelor degree (or forty courses)	
	Citizens	International
Universidad de Costa Rica	¢1,504,800.00	¢5,480,640.00
Instituto Tecnológico de Costa Rica	¢1,290,240.00	¢1,290,240.00
Universidad Nacional	¢1,049,472.00	¢2,098,944.00
Universidad Estatal a Distancia	¢1,140,000.00	¢1,710,000.00

Table 8.Costs to Students and their Families at Public Institutions

\*Note: The Universidad Estatal a Distancia charges tuition fees per course, not per credit. To simplify the analysis, the equivalent of 120 and 140 credits has been established at 40 courses, albeit not all courses have three credits and not all programs have 40 courses.

To determine whether public higher education is affordable in Costa Rica, an estimate of the percentage of the family income spent on education was calculated as follows: the average Costa Rican household makes ¢591,873 a month (Table 9). The average family with a son or daughter who enrolls twelve credits for two terms at a public university spends ¢217,188 a year, the equivalent of 2.82% of their annual income

on tuition<sup>4</sup>. This statistic coincides with INEC's study on the expenses of Costa Ricans: families spend an average of 3% of income on education (INEC, 2005). For most Costa Ricans, tuition at public universities is very affordable, even without financial aid or scholarships.

Table 9.

Affordability of Public Higher Education (2009)		
Quintile	Colones	Cost of Education (As % of Family Income)
Ι	¢147,230	11.35%
II	¢274,979	6.08%
III	¢412,811	4.05%
IV	¢632,381	2.64%
V	¢1,493,699	1.12%
Total	¢591,873	2.82%

Source: Instituto Nacional de Estadísticas y Censos (2009)

Tuition at public universities generates approximately 5% of their revenue, used namely to award scholarships to other students and student affairs activities (Conejo, 2004); these scholarships reduce the costs of attendance to a significant number of students (Table 10). The Universidad de Costa Rica awarded the greatest number of scholarships to their student population, while the Universidad Estatal a Distancia awarded the least (Rodríguez, 2008).

<sup>&</sup>lt;sup>4</sup> Annual income is equivalent to thirteen salaries, according to Costa Rican labor law.

### Table 10.

Scholarships Awarded at Public Institutions

Public University	Students on Scholarship		olarship
	Enrollment	Abs	Rel
Universidad de Costa Rica	32412	16896	52.13%
Instituto Tecnológico de Costa Rica	7821	1673	21.39%
Universidad Nacional	13339	6848	51.34%
Universidad Estatal a Distancia	21224	2884	13.59%

Source: OPES (2008)

The four public universities award partial and full socio-economic scholarships, which may include tuition, textbooks and other learning materials, as well as room, board, transportation, and health care. They also assign scholarships to students with high academic performance, and to those who participate in student groups. Work study opportunities are also available (Oficina de Planificación de la Educación Superior, 2004b).

The other costs of attending public institutions are covered through governmental appropriations. Public education spending in Costa Rica, as a percentage of GDP, equaled 4.9% in 2008, despite the fact that the Constitution mandates that 6% of GDP be spent on education. The largest share (45.5%) was allocated to primary education, while 27.8% was spent on secondary education and 18.8% on tertiary education (World Bank, 2009). Public expenditure per tertiary student as a percent of GDP per capita was 36.13% in 2008, above the Latin American average of 30.3% (World Development Indicators Database, 2009).

Four public universities secure, by constitutional directive, up to 85% of their revenue through a fund known as *Fondo Especial de Financiamiento de la Educación Superior Universitaria*, or FEES (Conejo, 2004). The FEES has been negotiated between public universities and the government every five years, since 1989. In the *Cuarto Convenio* (2004-2009), or fourth negotiation, the FEES was established as an increasing

percentage of the gross domestic product (Table 11) and in 2005, an additional budget called the *Fondo del Sistema*, or FS, was created to finance the development of public higher education in priority areas as defined by Consejo Nacional de Rectores (CONARE), the coordinating board for public institutions. In 2010, public universities will receive ¢226,211,136,000 a 16% increase over the FEES base for 2009 contemplated in the National Ordinary Budget (Consejo Nacional de Rectores, 2009).

Table 11.

*Percentage of Gross Domestic Product (GDP) Assigned to Public Higher Education* 

Year	% of GDP
2005	0.9
2006	0.95
2007	0.99
2008	1.02
2009	1.05

Source: Calderón (2005)

Public institutions also receive *restricted funds*, or project-specific funds as defined by laws, agreements, and contracts with third parties; funds from *auxiliary businesses* or *permanent activities*, defined as the sale of goods and services; funds from *special courses*, such as transitory activities and other teaching, extension, and research activities which are partially or completely self-financed; and funds from "graduate programs with complementary financing," defined as programs which receive funding from international and local organizations, or charge differentiated tuition fees (Universidad de Costa Rica, 2009).

Information regarding the total cost of public higher education is not publicly available. However, if public universities spent 24.3% of the FEES on research in 2002 (Calderón, 2005), a rough estimate could be drawn as to the cost of teaching per student by dividing 75% of the total FEES budget by the total student population<sup>5</sup>. Assuming that the same number of students who enrolled in 2008 (73,913) will enroll at the four public universities in 2010, every student will cost the taxpayers an average of ¢13,772,274 a year. Thus, the total average cost of a bachelor degree could be estimated at ¢15,075,402, if the costs to students and their families are included. These costs do not include room and board, transportation, laboratory fees, or any other expenses of the students who are not on scholarships.

Some might argue that teaching costs cannot be estimated in this manner, as FEES funds also finance community outreach and extension activities. However, it is unclear as to how many non-teaching related activities are financed with FEES funds, or alternatively, with revenue generated from sources like additional fees charged to students, restricted funds, auxiliary businesses, special courses, differentiated tuition schemes, or even surpluses or loans.

<sup>&</sup>lt;sup>5</sup> The same methodology was employed by María Isabel Brenes Varela, researcher at the Oficina de Planificación de la Educación Superior at CONARE, in her study *Deserción y repitencia en la educación superior universitaria de Costa Rica*, October 2005.

Table 12.

Education in Costa Rica	
Total number of students in public higher education	73,913
Total FEES budget awarded in 2010	¢226,211,136,000
FEES budget 2010 without research expenses (75% of total budget)	¢169,658,352,000
Cost per student, per term, to taxpayers	¢1,147,690
Cost per student, per year, to taxpayers	¢2,295,379
Cost per student, for the equivalent of a bachelor program (a total of 144 credits, or twelve 12- credit terms), to taxpayers	¢13,772,274
Tuition costs to students and their families	¢1,303,128
Total estimated cost of a bachelor's program at a public university	¢15,075,402

*Estimated Cost of a Bachelor Degree in Public Higher Education in Costa Rica* 

Students at most national private universities pay enrollment fees and tuition fees every term. Unlike most public institutions, tuition fees are generally defined by course, not credits. Exceptions include the Universidad para la Cooperación Internacional and the Universidad Adventista de Centro América, which charge tuition by course credits, per program. Others, like the Universidad Veritas and the Universidad Latinoamericana de Ciencia y Tecnología, charge tuition fees according to the number of classroom hours per course. The Universidad Creativa charges tuition fees by the number of class sessions per week, while the Universidad de Ciencias Médicas charges students a single tuition fee per term, which includes the enrollment fee. Some universities like the Universidad Libre de Derecho, the Universidad Bíblica Latinoamericana, the Universidad para la Cooperación Internacional, and the Universidad Veritas, set their fees in US dollars, but most do so in colones. As expected, tuition fees in the medical fields are higher than those in other programs. The average cost of a course in the *Licenciatura* in Medicine at the two special-focus medical schools is ¢309,572 and the average cost of the program at these institutions is ¢15,928,840, making these the most expensive programs taught at national private institutions of higher education.

In sharp contrast, enrollment fees in non-medical programs at the undergraduate level are paid once a term, and the average cost is ¢41,063 (Table 13). The Universidad Latina charges the highest enrollment fee (¢73,200), while the Universidad Evangélica de las Américas charges the lowest (¢8,250).

### Table 13.

# Costs to Students and their Families at Private Institutions

	<b>Enrollment fees</b>	Tuition per course
Minimum	<b>Ø</b> 8,250	¢20,000
Maximum	¢73,200	¢133,340
Average	¢41,063	¢50,401
Median	¢42,500	¢47,000
Mode	¢45,000	¢61,000
Standard Deviation	¢13,569	¢18,949

Tuition fees of undergraduate courses in non-medical fields cost an average of ¢50,401. The Universidad Cristiana del Sur charges the least (¢20,000) while the Universidad Veritas charges the most (¢133,340) for a three-hour course, and sets even higher tuition fees for courses with a greater number of hours. Thus, a student enrolled in a twelve- credit term (or the equivalent of four courses) at a local private university would spend an average of ¢201,604 per term on tuition fees, or a total of ¢2,016,040 on a 120- credit non-medical bachelor program. At this cost, the average family would have to spend 5.24% of their family income on a private higher education. Thus, contrary to popular belief, private higher education in non-medical fields seems to be affordable for the average family household (Table 14). Private

medical school is an entirely different situation. By requiring the average family to spend 32.19% of their monthly family income on education, attending medical school is a privilege of the few (Table 15).

(2009)		
Quintile	Colones	Cost of Education (As % of Family Income)
Ι	¢147,230	21.07%
II	¢274,979	11.28%
III	¢412,811	7.51%
IV	¢632,381	4.90%
V	¢1,493,699	2.08%
Total	¢591,873	5.24%

**Table 14.**Affordability of Private Higher Education(2009)

Source: Instituto Nacional de Estadísticas y Censos (2009)

Higher	Education (2009)	
Quintile	Colones	Cost of Education (As % of Family Income)
I	¢147,230	129.39%
II	¢274,979	69.28%
III	¢412,811	46.15%
IV	¢632,381	30.13%
V	¢1,493,699	12.75%
Total	¢591,873	32.19%

Table 15.Affordability of Medical School in PrivateHigher Education (2009)

Source: Instituto Nacional de Estadísticas y Censos (2009)

In sum, a non-medical bachelor's program at a national private university costs students and their families an average of 154.71% more than a bachelor program at a public university, *ceteris paribus*, but the program seems to cost society only 13.37% of what it costs at a public university (Table 16).

## Table 16.

*Comparative Costs of Non-Medical Bachelor Programs in Public and Private Higher Education* 

	Private higher education	Public higher education
Cost to students and families	¢2,016,040	¢1,303,128
Cost to students and the Central Government	¢2,016,040	¢15,075,402
	Diffe	rence
The cost of a private higher education to students and families, in comparison to public higher education		154.71%
The cost of a private higher education to students, families, and taxpayers, in comparison to public higher education		13.37%

National private universities are not eligible for government appropriations, grants, tax incentives nor do they receive substantial support from private sources. 68.89% of the current student population is enrolled in this sector and increasing rapidly over time (Table 17).

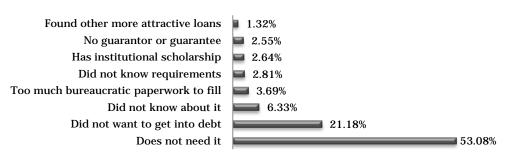
# Table 17.

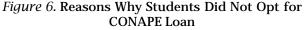
*Percentage of University Degrees Awarded by Private Universities* 

_					
	2004	2005	2006	2007	2008
	60.81%	58.37%	62.54%	65.92%	68.89%

Source: Estado de la Nación (2008)

Students in the private sector are eligible for institutional scholarships, financial assistance provided by employers or philanthropic organizations, loans from CONAPE, the national student loan agency, or loans from commercial banks. Only 3.6% of the current higher education population opted for a loan through CONAPE, which suggests that CONAPE loans have a limited impact on educational attainment and do not provide a significant source of public funding to private universities (Comisión Nacional de Préstamos para Educación, 2008). Furthermore, according to the survey in this study, 11.61% of the students enrolled at national private universities received institutional scholarships and less than 1.32% of the student population relied on loans from other entities to finance their education. More than half of the students stated that they did not need the CONAPE loan. Two percent of the students with institutional scholarships did not see a need in asking for a loan, and another 21.18% indicated they did not opt for a loan because they did not want to acquire debt (Figure 6). This result might reflect the same indisposition of Hispanic, low-income families in the United States to acquire debt (Cunningham & Santiago, 2008), or the same reluctance to borrowing that is evident in countries like Denmark, the Netherlands, the Philippines, France, Slovenia, and the United Kingdom (Vossensteyn, 1999). For sure, these figures are indicative that private higher education is affordable enough for most students who are enrolled in this sector. However, the main concern is the students who do not enroll, those who might consider the repayment conditions of current loan mechanisms unattractive or their future employment and income possibilities uncertain.







Tuition at international private universities is charged in dollars and is highly variable. For instance, the Universidad EARTH defined the following tuition fees for the next four years in their *Licenciatura* in Agricultural Sciences as follows: \$15,450

in 2010, \$15,950 in 2011, \$16,450 in 2012, and \$17,000 in 2013. The yearly fee includes tuition, but also medical insurance, room and board, materials, laboratory fees, and student services. Eighty percent of its student population has a partial or full scholarship.

Another international institution, the University for Peace, charges \$1,225 per credit, or \$24,959 for an eleven month master's program in the fields of peace and conflict studies, which includes \$23,370 of tuition plus \$1,225 in other expenses, like room, board, materials, and other fees. Financial assistance is available through many international organizations.

INCAE Business School charges \$44,490 for a 21-month long MBA program, which includes tuition plus other expenses, while the Centro Agronómico Tropical de Investigación y Enseñanza (CATIE) offers two year masters programs for \$16,730 in the fields of ecological conservation and \$32,400 for four-year doctoral programs. Both universities offer institutional scholarships, as well as financial assistance from international organizations.

The Instituto Centroamericano de Administración Pública charges \$4,000 for tuition in their nineteen-month master's programs, plus a \$200 enrollment fee. All costs are included, except housing. No information is available on the scholarship grants or loans that are available to students.

Lastly, the Facultad Latinoamericana de Ciencias Sociales (FLACSO) offers a Master's program in Local Economic Development, with a total cost of \$3,900, and a Master's program in Social Sciences for \$10,000. Unlike other institutions, every student in FLACSO is awarded a grant, plus a monthly stipend of \$600 at the master's level and \$1,000 at the doctoral level. The financial support from sponsors and international organizations allows these international universities to award substantial grants to their students, making education for local students affordable at these institutions.

### Learning

Efforts to assess the abilities of the college-educated population are incipient in Costa Rica. In 2010, public universities plan to incorporate the competency-based approach to the curriculum just like their European counterparts (CONARE, 2009), the first step in determining which general and discipline-specific skills are expected of college graduates, how they should be taught, and how they should be assessed. A few programs at private universities have recently begun using the same approach to curriculum design, but any conclusions as to the success of these experiences have not been documented.

In 2009, legislators presented a bill (number 17192) with the intention of allowing professional associations to assess the abilities of college graduates through licensure examinations; no profession requires licensure examinations at present for incorporation. The possibilities that this bill becomes law are uncertain, as a similar proposal was presented in 2001 but was filed away ("Resumen Legislativo", 2009).

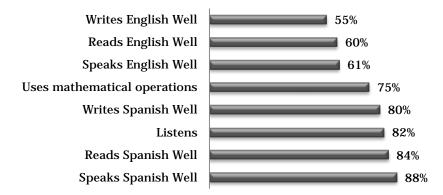
Quality assurance and the certification of the achievement of learning outcomes in Costa Rica relies on the efforts of the *Sistema Nacional de Acreditación de la Educación Superior* (SINAES), the national accreditation agency, and of the four public universities, eight private universities, and two international universities who comprise it. In 2009, 54 programs were accredited, which is progress, considering that only 17 programs were accredited in 2004 (Sistema Nacional de Acreditación de la Educación Superior, 2009). SINAES has articulated agreements with professional associations like the Colegio Federado de Ingenieros y Arquitectos (the architecture and engineering professional association) and the Colegio de Médicos y Cirujanos de Costa Rica (the medical association) to allow it to become directly involved with accreditation processes. Quality assurance also rests in the hands of the *Consejo Nacional de Educación Superior Privada* (CONESUP), the regulatory authority for private universities, which attempts to control institutions into compliance, with an indeterminate impact on learning outcomes.

A number of research studies have surveyed employers on the skills they require of the workforce, and the current levels at which their workers perform on those skills. Most studies have focused on particular fields, such as business administration (Cox & Fallas, 2003); information systems engineering (Cox & Fallas, 2004; Mata & Jofré, 2001; Oficina de Planificación de la Educación Superior 2004a); education (Cox & Fallas, 2005); and agronomy (Cox, 2008).

In the study intended for the purposes of curriculum assessment and design at the Universidad Latinoamericana de Ciencia y Tecnología (Castro, 2004), 150 large companies (of 100 or more employees) were surveyed on the skills that adults require for work. The skill- set assessed was adapted from the one defined by the *Secretary's Commission On Achieving Necessary Skills* in the United States as necessary for workplace success: basic skills, thinking skills, personal qualities, and workplace skills (SCANS, 1991). Basic skills assessed included reading, speaking, and writing in Spanish; reading, speaking, and writing in English; arithmetic, mathematics, and listening. The thinking skills that were assessed included creative thinking, decision making, problem solving, the ability to visualize, knowing how to learn, and reasoning. A third component examined personal qualities, such responsibility, self-esteem, sociability, self-agency, integrity, and honesty. The fourth component assessed people's ability to allocate resources, interpersonal abilities, ability to manage information, think systemically, and employ technology.

With regard to basic skills, employers found that workers had the most difficulties with the English language and the ability to perform basic mathematical computations. Workers scored an average of 73% on basic skills (Figure 7). The low abilities of the workforce in the English language were also underscored in another survey by CINDE, the Costa Rican Investment Promotion Agency, which is a serious concern, as 162 multinational companies require that their 45,261 employees be fluent in that second language (CINDE, 2009).





Source: Castro (2004)

Thinking skills, such as being able to solve problems, make decisions, know how to learn, and be creative, are highly valued by employers and considered essential in the skill-set of college graduates in Costa Rica (Consejo Nacional de Competitividad, 2007). However, in terms of the workers' thinking skills assessment, the ability to visualize, defined as the capacity to organize and process symbols, graphs, objects or other information, was considered the weakest, along with their abilities for creative thinking and reasoning. Employers assessed their workers' thinking skills with a score of 77.83% (Figure 8).

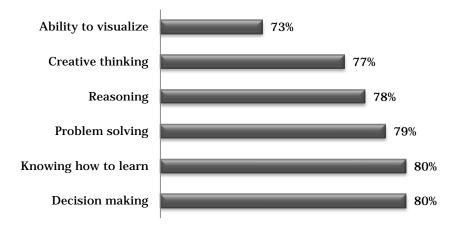
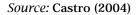
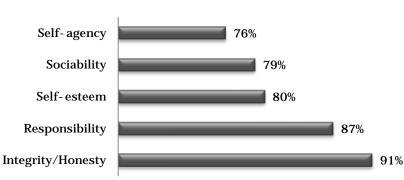
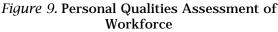


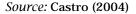
Figure 8. Thinking Skills Assessment of Workforce



Employers assessed the personal qualities of their workforce with an overall score of 82.6%. Employees scored lowest on self- agency, defined as the ability to assess one's own knowledge, skills, and abilities accurately; to set well- defined and realistic goals; to monitor one's own progress towards the attainment of goals; and to exhibit self- control. Costa Rican workers do not seem to be "self- starters." They are, however, characterized by high levels of honesty and integrity (Figure 9).

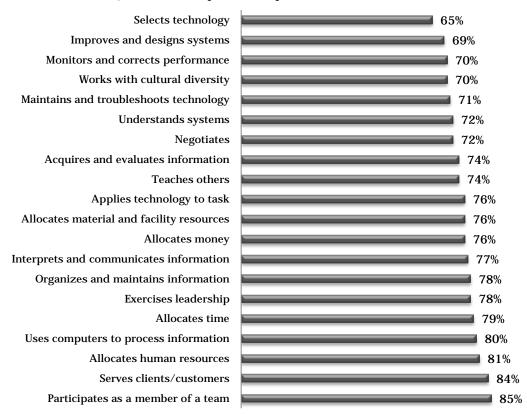






Lastly, workers scored lowest on workplace competencies, with an average of 75% (Figure 10). Employers believe their employees don't seem to be skilled in selecting the

right tools, procedures, or machines that will produce the expected results. They also seem to have difficulties preventing, identifying, and solving problems with computers and other technologies. Another area of difficulty is systems thinking: understanding how social, organizational, and technological systems work and how they are expected to operate within them. Employers expect their workers to have better skills in making suggestions to modify existing systems to improve products and services, and to develop new or alternative systems. Soft skills, such as leadership, negotiation, intercultural communication, and time management are scored below 80% and only customer service and teamwork, above 80% (Castro, 2004).



### Figure 10. Workplace Competencies of Workforce

Source: Castro (2004)

## **CHAPTER 2. INSTITUTIONAL CHARACTERISTICS AND DIFFERENCES**

Universities in Costa Rica have been traditionally categorized either as public or private: after all, this binary division often reflects similar governance and funding structures, institutional missions, organizational cultures, and management systems. The division, which is also reproduced in the Political Constitution of Costa Rica, is practical for statistical and administrative purposes, but it is not always helpful in understanding institutional characteristics and revealing specific differences.

A coherent classification system of institutions in Costa Rica should ideally reflect the criteria that are typically employed in other taxonomies around the world, so that institutions can be understood in an international context. Moreover, the typology should clearly avoid hierarchical classifications to avoid stratification and rankings to be used as a basis for political and funding decisions. It should be multidimensional and flexible, so that it does not become rigid or exclusive. It should be descriptive, not prescriptive, and incorporate only institutions which have been officially allowed to operate (Vught van, et al., 2005).

In the absence of critical data, the following systematic description of higher education classifies and groups institutions in two ways: one, by the structural characteristics of institutions, presented in this chapter, and another, by the characteristics of the students who enroll in them, presented in the following chapter. With more public access to institutional data in the future, a typology would use a multiple, not a dual, classification, where institutions would appear in several categories.

To determine institutional characteristics, publicly available information was collected using secondary research. Data included their year of foundation; legal structure; the number and disciplinary nature of the undergraduate and graduate programs they offer; the number of programs accredited by SINAES or other reputable accreditation agencies; the number of students enrolled; the number of degrees awarded; the number of campus locations; the tuition costs; the breadth of the services and infrastructure available to students; the number and types of international agreements of cooperation; and their extension programs. Documents were collected from all undergraduate and graduate degree-granting institutions of higher education in September and October of 2009; *parauniversitarias* were not included in the study, as less than 1% of the Costa Rican population graduates from these institutions (Instituto Nacional de Estadísticas y Censos, 2008).

Printed and digital documents included institutional catalogues and brochures; leaflets or printed material regarding tuition, fees, and scholarship programs; advertising materials on the institutions, its programs and services; other information that was publicly available through institutional websites and on campus; research reports on higher education in Costa Rica; and government documents. The documentation was obtained through Internet searches and campus visits. Data was analyzed by the researcher and validated using phone interviews and e-mail consultations.

The research method employed has its limitations: the data gathered is reliable insofar as the information found on institutional materials is accurate, up-to-date, and complete. The information has not been validated by auditors. Furthermore, information on printed documents does not always concur with information found on digital documents or with that provided through personal interviews.

Some data were altogether impossible to gather. Thus, missing enrollment data from private universities were imputed with a regression equation, using the enrollment and graduation figures from other institutions, where y=4.537x+186.4. Moreover, a proxy for graduation rates was employed: the enrollment of a specific year, in comparison to the diplomas awarded that year. If enrollment rates were to remain constant at a given institution, 25% of the student population should be graduating every year, in four year programs. Percentages higher than 25% could indicate

decreasing enrollment rates, as well as the presence of shorter or less rigorous programs, where students enroll more than five courses a term or opt out of courses through proficiency examinations, tutorials, or transfer credits. Percentages much below 25% could be indicative of attrition or significant increases in enrollment rates.

An important criterion, institutional emphasis on research, was not used to distinguish between national private universities, as only public universities receive public funding for research and international universities rely on funds of member countries, sponsoring international organizations, or private donors. The number and characteristics of the research projects undertaken by a few national private universities, using alternative sources of funding, are undocumented.

Lastly, the researcher is a source of data; it is in light of her knowledge, experiences, and attitudes as the provost of a national private university that the data was interpreted, adding an element of bias to the study. To allay the concerns of those who believe that the provost might have a vested interest in obtaining certain types of results, data in this study was collected by CID-Gallup, a reputable market research firm in the country.

To recapitulate, there are five public universities, six private international universities, and fifty private universities authorized to operate in Costa Rica. There are other institutions, such as the International University of Humanities and Social Sciences<sup>6</sup> and Thunderbird School of Management<sup>7</sup>, which are not authorized to operate in Costa Rica, but do. These institutions were not included in the study.

Moreover, three private universities and one public university will not appear. The Universidad del Diseño (UNIDIS) was founded in 1997 as a private special-focus institution in the field of architecture and, in 2007, graduated only two students. The

<sup>&</sup>lt;sup>6</sup> For more information on this institution, visit the following website: http://www.iuhs-edu.net/about\_iuhs

<sup>&</sup>lt;sup>7</sup> For more information on this institution, visit the following website: <u>http://www.thunderbird.edu/graduate\_degrees/distance\_learning\_mba-latin\_america/the\_partnership/campus\_descriptions.htm</u>

Universidad Empresarial de Costa Rica (UNEM) was founded in 1997 as a special-focus institution in business, and reported no graduates in 2007. These institutions have not been included in the study as neither enrolled new students in 2010; thus, these institutions have been classified as inactive.

The Universidad San Juan de la Cruz was also excluded from the study. It was founded in 1996 as a comprehensive institution, and reported 142 graduates and 270 students in 2007. However, the only campus authorized to operate by CONESUP is closed and the telephone number, disconnected, which would indicate that the institution was inactive. However, an English-language website, advertising a "Saint John of the Cross University" (a direct translation of Universidad San Juan de la Cruz), said to be located in San José, Costa Rica, offers programs which are not on CONESUP's list of approved programs, such as a Doctorate in Business Administration, a Doctorate in Higher Education, a Master of Science in Information Technology, and a dozen more undergraduate and graduate programs. Tuition fees are \$75 per credit hour in undergraduate programs and \$125 per credit hour in master's programs. Doctoral programs cost \$150 per credit hour. Master degrees can be obtained by enrolling an additional 36 credit hours after a bachelor's degree, and doctoral degrees, by enrolling 72 credit hours after a bachelor's degree. No information regarding the campus location, postal address, telephone numbers, or e-mail addresses is provided on the website<sup>8</sup>. It is uncertain whether this institution is currently operating.

Lastly, a public university, the Universidad Técnica Nacional, was not included in the study, as it was founded only recently, in 2008, and it is currently offering only associate degree programs and other technical specialities. The UTN was created when six *parauniversitarias* merged into one: the Colegio Universitario de Alajuela (CUNA), the Centro de Investigación y Perfeccionamiento de la Enseñanza Técnica (CIPET), the

<sup>&</sup>lt;sup>8</sup> More information on the Universidad San Juan de la Cruz can be found on their website, accessed on January 12, 2010, at <u>http://www.sjdlc.cr/</u>

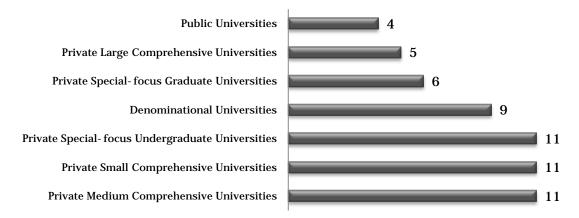
Centro de Formación de Formadores y Personal Técnico para el Desarrollo Industrial de Centro América (CEFOF), the Colegio Universitario de Puntarenas (CUP), the Colegio Universitario para el Riego y Desarrollo del Trópico Seco (CURDTS), and the Escuela Centroamericana de Ganadería (ECAG).

It is strategically located in the densely-populated and economically-vibrant province of Alajuela, where no public universities existed until then, and where 80,000 students required higher education and could not transfer into public universities due to bureaucratic barriers (Castillo, 2007). The institution operates with a budget of over \$10,000.000, and with the original faculty, infrastructure, and resources of the six community colleges. The Universidad Técnica Nacional has campus locations in Alajuela, Atenas, Puntarenas, and Guanacaste. One thousand nine-hundred forty-nine students enrolled its first year, in 2009 (Villegas, 2009).

All other institutions in the country have been classified into seven categories, based on publicly available information: their size (enrollment, degrees awarded, number of campuses, the number of academic programs offered, and the number of academic programs authorized to operate by CONESUP, the regulatory authority of private universities); the national or international orientation of the institution; the disciplinary nature of their academic offering (comprehensive or special focus); the type of special focus institution (denominational or non-denominational); and the predominating educational level of their academic offering (mostly undergraduate or mostly graduate degrees). The number of institutions per category is indicated in Figure 11. The categories are:

- Public Universities
- Private Large Comprehensive Universities
- Private Medium Comprehensive Universities
- Private Small Comprehensive Universities
- Private Special-Focus Denominational Universities
- Private Special-Focus National Undergraduate Universities
- Private Special-Focus International Graduate Universities

# Figure 11. Number of Institutions of Higher Education in the Study, per Category



## **Public Universities**

Table 18.

Most universities in Costa Rica use acronyms instead of their full names, including the four public universities (Table 18). Article 84 of the country's Political Constitution awards all public universities administrative, organizational, and governmental autonomy. Public institutions are free to establish their plans, programs, budgets, and internal structure as they desire. These institutions are coordinated by the Consejo Nacional de Rectores (CONARE), a board constituted by the provosts of each of these institutions, as well as a member of the Oficina de Planificación de la Educación Superior (OPES), a technical and consultative office. To work with the Central Government, CONARE established a *Comisión de Enlace*, or Liaison Commission. The members of this commission are the Ministers of Education, Revenue, the Presidency, and Science and Technology, as well as the provosts, members of CONARE.

Acronyms of Public Universities	
Universities	

Universities	Acronym
Instituto Tecnológico de Costa Rica	TEC
Universidad de Costa Rica	UCR
Universidad Estatal a Distancia	UNED
Universidad Nacional	UNA

The oldest institution is the Universidad de Costa Rica, founded in 1940, and the youngest in this category is the Universidad Nacional a Distancia, founded in 1977 (Table 19).

Legal Structure and Year of Foundation of Public Universities			
Acronym	Legal structure	Year founded	
UCR	Independent public entity	1940	
TEC	Independent public entity	1971	
UNA	Independent public entity	1973	
UNED	Independent public entity	1977	

Table 19.

The Universidad de Costa Rica, with eleven campus locations, has the largest enrollment of the four public institutions, as well as the greatest number of degrees awarded in 2007: 34,243 students enrolled and 4,422 students graduated (Table 20). The University City is located in San Pedro de Montes de Oca, San José, and the regional campuses are located in Turrialba, San Ramón, Liberia, Limón-Centro, and Puntarenas. The Universidad Estatal a Distancia, the public distance education university, is the second largest university in terms of enrollment, and due to the nature of its programs, has many geographical locations in Costa Rica: 34<sup>9</sup>. The Universidad Nacional, the third largest institution in terms of enrollment and second largest in terms of degrees awarded, has six campuses (Heredia, Nicoya, Liberia, Coto, Pérez Zeledón, and Sarapiquí). The Instituto Tecnológico de Costa Rica, the smallest public institution of the category, has four campuses: the main campus is in Cartago, another two campuses are located in San José, and the last is in San Carlos.

According to the ratio of degrees to enrollment, the data suggests that the Universidad de Costa Rica and the Universidad Estatal a Distancia have significantly

<sup>&</sup>lt;sup>9</sup> Institutional advertising in 2010 establishes the existence of 34 campuses, but OPES (Cabrera-Valverde, 2008) lists 43 university centers.

lower graduation rates than the Universidad Nacional and the Instituto Tecnológico. The reasons are unknown.

Table 20.

Acronym	Degrees	Enrollment	Ratio degrees to enrollment	Campus locations
UCR	4422	34243	12.91%	11
UNA	2420	13039	18.56%	6
UNED	2328	20187	11.53%	34
TEC	1243	6852	18.14%	4

*Institutional Size of Public Universities, as to the Number of Degrees Awarded, Enrollment, Graduation Rates, and Number of Campus Locations* 

The University of Costa Rica is the largest institution in terms of the number of undergraduate and graduate programs it offers and the Universidad Estatal a Distancia, the smallest (Table 21).

Table 21.

Number of Programs Offered (2010)			
Acronym	Undergraduate programs	Graduate programs	
UCR	217	241	
UNA	69	48	
TEC	41	25	
UNED	39	24	

*Institutional Size of Public Universities, as to the Number of Programs Offered (2010)* 

Tuition at the Universidad de Costa Rica is the highest in the category, at ¢10,450 per credit for most undergraduate courses (Table 22). The Universidad Estatal a Distancia sets higher tuition rates than the Universidad Nacional but lower than the Universidad de Costa Rica, at ¢28,500 a course, and the Instituto Tecnológico charges ¢8,960 a credit. The Universidad de Costa Rica also has the greatest number of accredited programs through SINAES: 17. Three of those programs sought

accreditation equivalency, as they had been previously accredited by the Canadian Engineering Accreditation Board (CEAB). While the Universidad Nacional is the least expensive public institution in the category, it has the second highest number of accredited programs through SINAES: 10. Also, the Instituto Tecnológico is particularly inexpensive considering that most of its programs are in the fields of technology and engineering and that nine of its programs are accredited by SINAES, four of which gained accreditation equivalency for having been accredited previously by the CEAB.

## Table 22.

Acronym	Accredited programs	Enrollment fee	Tuition per credit
UNED	2	Ø8,000	28,500*
UCR	17	<b>Ø</b> 2,100	<b>©10,450</b>
TEC	9	<b>@</b> 2,965	<b>Ø</b> 8,960
UNA	10	<b>Ø</b> 8,055	¢7,288

*The Number of Accredited Programs and the Costs of Tuition at Public Universities* 

\* Tuition at the UCR, UNA, and TEC is charged per credit, while UNED tuition is charged per course. The tuition is for bachelor programs. Licenciatura and graduate programs, as well as certain programs, have differentiated tuition fees.

Public universities have a wide array of student services: the Universidad de Costa Rica, for instance, has residence halls, sports facilities (pools, gymnasiums, and sports fields), transportation services, cafeterias, services for students with disabilities, career services, a financial aid office, health services, vocational orientation and psychological counseling services, student government and clubs, a day care center, a newspaper, a television channel, radio stations, an publishing house, various other publications, libraries, cultural and recreational events, and wireless access to the Internet. The Instituto Tecnológico de Costa Rica and the Universidad Nacional have many of the same student services; only the Universidad Estatal a Distancia has significantly fewer services than the other three institutions, as it serves the needs of distance education students. Notably, it is the only university which makes its educational programs available to convicts in prisons.

The Universidad de Costa Rica also has the most agreements of cooperation with international universities (in 44 countries) as well as international non-governmental agencies, local NGO's, and the public administration. The Instituto Tecnológico de Costa Rica has agreements of cooperation with institutions in 19 countries as well as local agreements. The Universidad Nacional has fewer agreements of cooperation with international universities, such as Lock Haven University, Appalachian State University, East Carolina University and Chico State University, Aalborg University, and SUNY Geneseo. No information is publicly available on the agreements of cooperation at the Universidad Estatal a Distancia or the impact of any of these international agreements of cooperation on students, faculty, and staff.

All public universities are active in the community, and their extension programs include hundreds of cultural and recreational activities as well as life-long learning and professional development opportunities. The Universidad de Costa Rica has over 500 extension projects. Moreover, it is the only public university to have established 300 hours of mandatory community service for its undergraduate students. Like the Universidad de Costa Rica, the Universidad Nacional also offers continuing education courses, and organizes projects like student fairs and other events at the national level. Fewer extension services are offered at the Instituto Tecnológico and the Universidad Estatal a Distancia, consisting namely of continuing education courses.

All public universities receive public funding for research, with which they finance 12 research centers, 1,248 projects, and the salaries of 981 researchers (Consejo Nacional de Rectores, 2008).

## **Private Large Comprehensive Universities**

Five institutions have been classified as private large comprehensive universities; they use the acronyms found in Table 23. These universities, by the author's definition, teach two or more programs in different disciplinary fields and have at least 5,000 students.

Universities	Acronym
Universidad de las Ciencias y el Arte en Costa Rica	UNICA
Universidad Interamericana	UICR
Universidad Internacional de las Américas	UIA
Universidad Latina	U Latina
Universidad Metropolitana Castro Carazo	UMCA

**Table 23.**Acronyms of Private Large Comprehensive Universities

Four were legally constituted as corporations, and only one as a non-profit association (Table 24). Two were founded in the 1980s and three in the 1990s. In corporations, profits can be distributed as dividends among shareholders. No governmental oversight is required. In contrast, associations or foundations are nonprofit entities that must reinvest their profits for the betterment of the institution. The difference between associations and foundations in Costa Rica is the degree to which oversight is provided by the government; foundations are supervised by the Comptroller General of the Republic, whereas associations are not. The founders of associations and foundations can be individuals, as well as entities. The differences between non-profit institutions and the for-profit institutions of higher education are negligible, as national private universities in Costa Rica must pay taxes, regardless of their legal structure. Both types of institutions must also invest in their own development to expand their competitive advantages. Furthermore, associations and foundations do not issue dividends, but they have other mechanisms to distribute profits, namely compensation structures.

Table 24.

-		
Acronym	Legal structure	Year founded
UIA	Corporation	1986
U Latina	Corporation	1989
UICR	Corporation	1990
UMCA	Non-profit Association	1996
UNICA	Corporation	1997

*Legal Structure and Year of Foundation of Private Large Comprehensive Universities* 

The Universidad Latina was once the Collegium Latinum, a school of the Universidad Autónoma de Centro América (UACA), the first private university of Costa Rica, founded in 1976. In 1989, it became an independent proprietary institution belonging to Carlos Salas and Lorena Madrigal. In 2008, it was acquired by Laureate International Universities, a for-profit corporation with more than half a million students around the world. In 2007, the Universidad Latina had the greatest number of campus locations amongst private institutions, the largest enrollment, and the most number of degrees awarded (Table 25). It currently has campuses in densely-populated regions like Santa Cruz, Puntarenas, Cañas, Grecia, Limón, Pérez Zeledón, Paso Canoas, and Palmares.

#### Table 25.

Institutional Size of Private Large Comprehensive Universities, as to the Number of Degrees Awarded, Enrollment, Graduation Rates, and Number of Campus Locations

Acronym	Degrees	Enrollment	Ratio degrees to enrollment	Campus locations
U Latina	3,584	16,900	21%	10
UMCA	1,851	6,777	27%	8
UNICA	1,228	5 <b>,</b> 758	21%	6
UICR	1,064	8,492	13%	2
UIA	594	6,624	9%	2

\**Missing data (in bold italics) was imputed with a regression equation, where y*=4.537*x*+186.4

The next largest institution in terms of enrollment is the Universidad Interamericana de Costa Rica, acquired by Laureate International Universities five years earlier from its original proprietor, William Salom, in 2003. Its main campus is located in Heredia, with another campus location in San José. It reports enrolling 8,492 students. In February of 2010, the Universidad Interamericana de Costa Rica requested authorization from CONESUP to change its name, seeking to become a campus location of the Universidad Latina.

In terms of the number of degrees awarded and the number of campus locations, the Universidad Metropolitana Castro Carazo is the second largest private institution in the country. It evolved from the Escuelas Castro Carazo, founded in 1936 by Miguel Ángel Castro Carazo, four years before the Universidad de Costa Rica, the first public university. It has campuses in the same geographical territories as the Universidad Latina, as well as in Puriscal.

The Universidad de las Ciencias y el Arte de Costa Rica, which broke off from the Universidad Panamericana, another UACA school, was founded by Álvaro Aviles. It has an estimated 5,758 students and 7 campus locations in 4 provinces: San José, Alajuela, Cartago, Tibás, Desamparados, Heredia, and Esparza. The Universidad Internacional de las Américas, the fifth school in the category, was founded by Manuel Polini in 1986. It reported having 6,624 students in 2007. Its two campuses are located in San José and Heredia.

The comparatively low number of degrees awarded in relation to the enrollment at the Universidad Interamericana de Costa Rica and the Universidad Internacional de las Américas could be attributed to one or more factors, such as significant increases in the enrollment rates, high attrition rates, or transcription errors in the enrollment figures.

## Table 26.

Acronym	Undergraduate programs offered	Undergraduate programs approved by CONESUP	Graduate programs offered	Graduate programs approved by CONESUP
U Latina	47	141	12	54
UIA	46	62	10	17
UICR	40	62	21	34
UNICA	25	67	12	21
UMCA	24	40	4	7

*Institutional Size of Private Large Comprehensive Universities, as to the Number of Programs Offered (2010)* 

The Universidad Latina is the private university which offers the most undergraduate programs in the country, 47, while the Universidad Interamericana de Costa Rica offers the most graduate programs, 21 (Table 26). UMCA offers the fewest undergraduate and graduate programs in the category, 24 and 4, respectively. Universities in this category offer only 65% of the undergraduate programs and 59% of the graduate programs they have approved by CONESUP.

They award majors in many traditional disciplines, including the medical fields (Medicine, Dentistry, Nursing, Optometry, Physical Therapy, Pharmacy); business and economics (Accounting, Marketing, Human Resources, International Commerce, Finance, Hotel Management, Project Management, Logistics, Customs Management, and Health Management); engineering (Information Systems, Electronic, Electromedical, Industrial, Software, Network, Industrial, and Civil Engineering, for instance); natural resources (Tourism and Biological Sciences); Law; Psychology; Communications (Journalism, Advertising, and Public Relations); International Relations; Arquitecture; Fine Arts; and multiple majors in the field of Education. However, they do not always offer all of their programs on every campus location.

### Table 27.

Acronym	Accredited programs	Enrollment fee	Tuition per course
UICR	4	¢53,000	¢77,800
U Latina	0	¢73,200	¢72,000
UIA	0	¢52,000	¢67,000
UMCA	0	¢43,500	¢50,000
UNICA	0	¢41,040	<b><i>¢</i>42,000</b>

*The Number of Accredited Programs and the Costs of Tuition at Private Large Comprehensive Universities* 

In this class, only the Universidad Interamericana de Costa Rica has four programs accredited by SINAES (Table 27). Its tuition is also the highest in the country, at ¢77,800 per course, but it offers tuition discount rates up to 40% to students who have graduated from public high schools in the last year and even discounts to students who enroll on a given day. Enrollment fees are highest at the Universidad Latina, and it awards fewer tuition discounts. The tuition costs of both Laureate institutions average ¢74,900 per course, while the tuition costs of the next three institutions average ¢53,000 per course. However, most universities have differentiated tuition fees for campuses located in rural areas, as well as discounts for students who work in companies, non-profit organizations, and governmental entities.

The Universidad Latina, the Universidad Interamericana de Costa Rica, and the Universidad Internacional de las Américas offer student services like libraries, career services, counseling and psychological services, wireless Internet, auditoriums, cafeterias, computer laboratories, bookstores, and student events. The Universidad Interamericana de Costa Rica and the Universidad Latina also report the use of online course management systems. The Universidad Interamericana is the only university in its class with sports fields and the Universidad Internacional de las Américas, the only one with a newspaper and a television channel.

With regards to international cooperation, both Laureate institutions offer exchange programs with other Laureate universities around the world. Moreover, the Universidad Internacional de las Américas states in all of its advertising that it is accredited by WAUC, the World Association of Universities and Colleges, an accrediting service unrecognized by the U.S. Department of Education. The Universidad Metropolitana Castro Carazo and the Universidad de las Ciencias y el Arte do not have international agreements of cooperation.

The Universidad Latina, the Universidad Interamericana de Costa Rica, and the Universidad Metropolitana Castro Carazo systematically offer continuing education courses, while the Universidad Internacional de las Américas and the Universidad de las Ciencias y el Arte do not.

# **Private Medium Comprehensive Universities**

The following eleven institutions have been classified into the category of private medium comprehensive universities, as they all have enrollments of more than 1000 students and less than 500 and offer two or more different disciplinary programs (Table 28). Table 28.

Universities	Acronym
Universidad Americana	UAM
Universidad Autónoma de Centroamérica	UACA
Universidad Central	UC
Universidad de San José	USJ
Universidad Fidélitas	U Fidélitas
Universidad Florencio del Castillo	UCA
Universidad Hispanoamericana	UH
Universidad Internacional San Isidro Labrador	UISIL
Universidad Latinoamericana de Ciencia y Tecnología	ULACIT
Universidad Libre de Costa Rica	ULICORI
Universidad Santa Lucía	USL

Acronyms of Private Medium Comprehensive Universities

The oldest private university in Costa Rica, the Universidad Autónoma de Centro América, was founded in 1976 by a group of college professors who saw a opportunity in the number of students who did not gain access to public higher education: Enrique Benavides, Jorge Corrales, Alberto di Mare, Guido Fernández, Alfredo Fournier, Fabio Fournier, Edmundo Gerli, Fernando Guier, Enrique Malavassi, Guillermo Malavassi, Gonzalo Ortiz, Rafael Robles, Rogelio Sotela, Cristian Tattenbach, Luis Demetrio Tinoco, Cecilia Valverde, Renato Viglione, and Thelmo Vargas (Table 29). The UACA was founded under the Oxbridge model, an organizational structure comprised by small institutions of no more than 1,000 students each. Many of these UACA colleges became independent universities in the 1990s.

The Universidad Latinoamericana de Ciencia y Tecnología was founded more than a decade later, in 1987, by Álvaro Castro-Harrigan and Vilma Montero, also founders of the Universidad Metropolitana Castro Carazo. Every other institution in the group was created in the 1990s by the following individuals: Manuel Polini, founder of the Universidad Internacional de las Américas, also founded the Universidad Central. Jorge Sequeira founded the Universidad de San José; Carlos Paniagua, the Universidad Libre de Costa Rica; Rodolfo Valverde, the Universidad Florencio del Castillo; and Miguel Acuña, the Universidad Internacional San Isidro Labrador. The Universidad Americana was founded by the original proprietors of the Universidad Latina; this institution was also acquired by Laureate International Universities in 2008. Both the Universidad Fidélitas and the Universidad Hispanoamericana were once institutions operated under the UACA umbrella owned by Magdalena Román and Ángel Marin, respectively. Four out of eleven institutions were founded as non-profit entities.

Table 29.

Acronym	Legal structure	Year founded
UACA	Non-profit Foundation	1976
ULACIT	Corporation	1987
UC	Corporation	1990
UH	Corporation	1992
USJ	Non-profit Association	1992
ULICORI	Corporation	1993
U Fidélitas	Corporation	1994
UCA	Corporation	1995
USL	Non-profit Foundation	1996
UAM	Corporation	1997
UISIL	Non-profit Association	1997

*Legal Structure and Year of Foundation of Private Medium Comprehensive Universities* 

The largest institution in terms of enrollment and degrees awarded is the Universidad Hispanoamericana, with an estimated 3,703 students and 775 degrees awarded (Table 30). In terms of the number of campus locations, the Universidad de San José, the Universidad Internacional San Isidro Labrador, and the Universidad Florencio del Castillo all have the greatest number of campus locations: eight. The Universidad Latinoamericana de Ciencia y Tecnología and the Universidad Fidélitas are

exceptions in the category, as they have only one campus, both in San José.

Table 30.

*Institutional Size of Private Medium Comprehensive Universities, as to the Number of Degrees Awarded, Enrollment, Graduation Rates, and Number of Campus Locations* 

Acronym	Degrees	Enrollment	Ratio degrees to enrollment	Campus locations
UH	775	3,703	20.93%	5
USJ	952	3,682	25.86%	8
UISIL	769	3,675	20.93%	8
UAM	689	3,312	20.80%	3
U Fidélitas	568	2,763	20.56%	1
ULACIT	540	2,702	19.99%	1
ULICORI	526	2,573	20.44%	3
UCA	855	2,372	36.05%	8
USL	826	2,175	37.98%	7
UACA	471	2,070	22.75%	5
UC	309	1,472	20.99%	5

\**Missing data (in bold italics) was imputed with a regression equation, where y*=4.537*x*+186.4

The Universidad Florencio del Castillo and the Universidad Santa Lucía graduated a greater percentage of students in 2007, in comparison to other institutions. They graduated 36.05% and 37.98% of their student population in one year, when the entire category graduated, on average, 24.30% of their student population.

The Universidad Hispanoamericana offers the greatest number of programs at the undergraduate level, while the Universidad Latinoamericana de Ciencia y Tecnología offers the most graduate programs (Table 31). In terms of their programs, these institutions offer a wide variety of options, many of the same alternatives available through the private large comprehensive institutions, but also several other choices, including Air Transportation, History, Mechanical Engineering and Maintenance, Topography, Library Sciences, Philosophy, Philology, Design of Commercial Spaces, Natural Sciences, Occupational Health and Safety, Tax Consulting, Medical Information Systems, Information Systems Auditing, Accident Prevention Management, Aquiculture, Food Technology, Insurance, Nutrition, Music, Criminology, and Social Work. Like private large comprehensive universities, institutions in this category offer 65% of the programs that were approved by CONESUP.

### Table 31.

Acronym	Undergraduate programs offered	Undergraduate programs approved by CONESUP	Graduate programs offered	Graduate programs approved by CONESUP
UACA	40	76	8	24
ULACIT	32	59	14	24
UAM	29	44	5	5
ULICORI	29	35	4	7
UC	27	61	1	3
UH	26	61	11	14
U Fidélitas	25	37	9	14
USJ	21	37	6	6
UCA	19	23	4	5
UISIL	17	27	1	4
USL	15	19	11	12

*Institutional Size of Private Medium Comprehensive Universities, as to the Number of Programs Offered (2010)* 

The only institution in this class with programs accredited by SINAES is the Universidad Latinoamericana de Ciencia y Tecnología, which is also the most expensive university in the category, charging ¢74,100 a course (Table 32). The Universidad Autónoma de Centro América and the Universidad Hispanomericana are the second and third most expensive. The least expensive institution is the Universidad Internacional San Isidro Labrador, charging ¢32,260 per course.

Table 32.

Acronym	Accredited programs	Enrollment fee	Tuition per course
ULACIT	3	¢69,700	<b><i>¢</i>74,100</b>
UACA	0	¢60,005	¢62,115
UH	0	<b><i>Ø</i>48,500</b>	¢61,000
U Fidélitas	0	<b><i>₡</i>49,000</b>	¢60,000
UC	0	<b><i>₡</i>46,800</b>	<b><i>¢</i>48,400</b>
UAM	0	<b><i>₡</i>43,000</b>	¢43,500
USJ	0	<i>©</i> 41,000	¢43,000
USL	0	<b><i>₡</i>40,000</b>	¢40,000
UCA	0	¢35,000	¢37,000
ULICORI	0	¢35,000	¢36,000
UISIL	0	<b><i>©</i>22,000</b>	¢32,260

*The Number of Accredited Programs and the Costs of Tuition at Private Medium Comprehensive Universities* 

The Universidad Latinoamericana de Ciencia y Tecnología, the Universidad Autónoma de Centro América, the Universidad Hispanoamericana, and the Universidad Fidélitas offer student services like libraries, cafeterias, computer laboratories, photocopy centers, parking lots, career services, and Internet access, wireless or not. ULACIT also offers online research databases at their library, online education, student clubs, an international office, a student lounge, psychological counseling, health services, and study lounges. UACA offers health services, transportation services and sports facilities, including a swimming pool. The other institutions in the category have fewer services, namely cafeterias, libraries, computer labs with access to the Internet, and study lounges.

Only the Universidad Latinoamericana de Ciencia y Tecnología, the Universidad Hispanoamericana, the Universidad Fidélitas, and the Universidad Americana have multiple agreements of cooperation with international universities. The Universidad Latinoamericana de Ciencia y Tecnología has established working relationships with Tufts University, the University of California in Los Angeles (UCLA), New York University, the INCAE Business School, the Universidad Complutense de Madrid, the University of Cologne, and other institutions in more than twenty countries. It also signed an agreement of cooperation with a local public university, the Universidad Nacional. The Universidad Hispanoamericana has signed agreements with universities in Brazil, Cuba, Spain, El Salvador, France, and with hospitals in the United States: the Baptist Health Hospital and the Kendall Regional Medical Center in Florida. The Universidad Fidélitas has agreements with three international universities and the Universidad Americana advertises agreements with other Laureate institutions. The Universidad Internacional San Isidro Labrador has an agreement of cooperation with Southwestern Oklahoma University. All institutions in the category have signed agreements with multiple entities in the private, public, and non-profit sector, for the purposes of awarding tuition discounts.

Most institutions in the category offer few or no extension courses. Only the Universidad Latinoamericana de Ciencia y Tecnología, the Universidad Americana, and the Universidad de San José offer extension programs systematically.

## **Private Small Comprehensive Universities**

The following eleven institutions are private small comprehensive institutions because they have less than 1000 students and offer programs in at least two different disciplines (Table 33).

Universities	Acronym
Universidad Alma Mater	FUNDEPOS
Universidad Autónoma de Monterrey	UNAM
Universidad Continental de las Ciencias y las Artes	UCCART
Universidad de Ciencias Empresariales	UCEM
Universidad del Valle	UVA
Universidad Federada San Judas Tadeo	U Federada
Universidad Independiente de Costa Rica	U Independiente
Universidad Isaac Newton	UNIN
Universidad Magíster	U Magíster
Universidad Panamericana	UPA
Universidad Tecnológica Costarricense	UTC

Table 33.Acronyms of Private Small Comprehensive Universities

The oldest institution of the category is the Universidad Panamericana, a UACA school until 1988 (Table 34). Other universities in this category that broke off from the UACA include the Universidad San Judas Tadeo, Universidad Isaac Newton, Universidad Magíster, and the Universidad Continental de las Ciencias y las Artes. The Universidad San Judas Tadeo, which appears registered in CONESUP as the Universidad Federada de Costa Rica, was founded by Rodrigo Fournier, Helia Betancourt, and Nora Ramírez. The Universidad Isaac Newton was founded by Julio Duarte in 1995. Every other institution was founded in the 1990s, most recently the Universidad Alma Mater, the Universidad de las Ciencias y el Arte, UNICA), and the Universidad Tecnológica Costarricense. This last institution grew out of a *parauniversitaria* called the Instituto Parauniversitario Jiménez, founded in 1994. The Universidad Autónoma Monterrey also had its beginnings as a *parauniversitaria*, the Escuela Superior de Ciencias Contables (ESCAE), and the founders of Universidad Alma Mater were initially all faculty at the Universidad de Costa Rica. Four universities are legally structured as non-profit entities, and the others are

corporations. Information regarding the founders of the remaining institutions was publicly unavailable.

Table 34.

Legal Structure and Year of Foundation of Private Small
Comprehensive Universities

Acronym	Legal structure	Year founded
UPA	Corporation	1988
U Federada	Non-profit Foundation	1992
UNAM	Corporation	1994
UNIN	Non-profit Foundation	1995
U Magíster	Corporation	1996
U Independiente	Corporation	1996
UCEM	Non-profit Association	1997
UVA	Corporation	1998
UTC	Corporation	1999
UCCART	Non-profit Foundation	1999
FUNDEPOS	Corporation	1999

The Universidad Magíster is the largest institution of the group with an enrollment of 1,003 in 2007, and 180 degrees awarded (Table 35). It is interesting to note that it has only one campus, in contrast to the Universidad Panamericana, which has 8 campuses approved with a total student population estimated at 318 and 29 graduates. Sixty-three percent of the institutions have only one campus, but the Universidad Continental de las Ciencias y las Artes has three campus locations, the Tecnológica Costarricense has two, and the Universidad del Valle has two.

## Table 35.

Acronym	Degrees	Enrollment	Ratio degrees to enrollment	Campus locations
U Magíster	180	1,003	17.95%	1
UTC	158	813	19.43%	2
U Federada	194	797	24.34%	1
UVA	53	734	7.22%	2
UCEM	31	524	5.92%	1
UCCART	58	450	12.89%	3
UNIN	42	377	11.14%	1
UPA	29	318	9.12%	8
UNAM	83	292	28.42%	1
U Independiente	93	157	59.24%	1
FUNDEPOS	66	149	44.30%	1

Institutional Size of Private Small Comprehensive Universities, as to the Number of Degrees Awarded, Enrollment, Graduation Rates, and Number of Campus Locations

\*Missing data (in bold italics) was imputed with a regression equation, where y=4.537x+186.4

With regards to the number of degrees awarded, the Universidad Independiente graduated 59.24% of its student population in one year and FUNDEPOS, 44.30%. The more reasonable explanation for such high rates of graduation would be that institutions had closed enrollments to new students or that enrollment rates had sharply declined. However, both universities have open enrollment, which suggests that they are not closing. Other explanations could be that students are enrolling a comparatively high number of courses each term or that programs are short in duration. Furthermore, institutions could be accepting an unusually high number of transfer credits, providing credits through proficiency exams, or authorizing courses to be taught through tutorials, known to be less rigorous than courses employing other teaching methods. In contrast, institutions like the Universidad de Ciencias Empresariales, Universidad del Valle, Universidad Panamericana and Universidad Isaac Newton graduated a low average of 8.34% of their student population.

The Universidad Panamericana has the greatest number of approved

undergraduate programs in the country, 34, while the Universidad Independiente offers the largest number of graduate programs, 7 (Table 36). The Universidad Continental de las Ciencias y las Artes offers the fewest programs in general. Small private comprehensive universities offer traditional programs like Business Administration, every field of Education, Law, Advertising, Public Relations, Civil and Industrial Engineering, Information Systems Engineering, Tourism, English, Arquitecture, Nursing, Journalism, Medicine, Psychology, and Secretarial Studies. Non-traditional programs include Environmental Engineering, Fine Arts, Criminology, and Video Production. Programs in the field of Business Administration, Education, and Law are the most predominant in this category. Small private comprehensive universities offer only 68% of the programs that were approved by CONESUP.

#### Table 36.

*Institutional Size of Private Small Comprehensive Universities, as to the Number of Programs Offered (2010)* 

Acronym	Undergraduate programs offered	Undergraduate programs approved by CONESUP	Graduate programs offered	Graduate programs approved by CONESUP
UPA	34	19	1	1
UVA	20	24	0	1
U Independiente	10	15	7	9
UNAM	10	11	5	5
UNIN	10	12	1	1
U Federada	9	15	2	4
U Magíster	8	24	4	5
UTC	8	9	2	2
UCEM	8	10	0	0
FUNDEPOS	7	10	4	5
UCCART	6	6	2	3

No universities in the category have programs accredited by SINAES (Table 37). The tuition fees are much lower than those in large or medium-sized universities, being the Universidad Federada the most expensive at ¢48,000 per course, and the Universidad Continental de las Ciencias y las Artes, the least expensive, at ¢25,000.

Table 37.

Acronym	Accredited programs	Enrollment fee	Tuition per course
U Federada	0	¢45,000	¢48,000
FUNDEPOS	0	¢35,000	¢46,000
U Magíster	0	¢42,000	¢45,000
UVA	0	¢43,500	¢44,800
UNAM	0	¢45,000	¢43,000
UNIN	0	¢41,000	¢41,000
UCEM	0	¢30,000	¢38,400
U Independiente	0	¢30,000	¢37,000
UTC	0	¢31,000	¢35,000
UPA	0	¢33,000	¢33,000
UCCART	0	¢30,000	¢25,000

*The Number of Accredited Programs and the Costs of Tuition at Private Small Comprehensive Universities* 

Most institutions in this category only have a small library, a *soda* or small food dispensary, and a computer lab. The Universidad Alma Mater also has a photocopy center, wireless Internet, and parking, while the Universidad Autónoma de Monterrey also reports having study lounges, and the Universidad San Judas Tadeo, transportation services and publications. Some report having tuition discounts for private, non- profit, and governmental entities. Some institutions, like the Universidad Magíster and the Universidad Continental de las Ciencias y las Artes, offer a few extension courses.

### **Private Special-Focus Denominational Universities**

The following nine institutions have been classified as private special-focus denominational universities; all of these universities are faith-related institutions and were founded by religious groups (Table 38). Three institutions are Catholic: the Universidad Católica was founded by the Episcopal Conference of Costa Rica, the Universidad La Salle by a group of La Salle brothers, and the Universidad Juan Pablo II by an individual priest, Padre Solano. Every other denominational university is Protestant. The Universidad Adventista de Centro América was founded by Seventh Day Adventists, the Universidad Metodista de Costa Rica by the Asociación Evangélica de Costa Rica, and the other institutions, by individuals who profess the evangelical faith.

Acronyms of Denominational Universities	
Universities	Acronym
Asociación Universitaria ESEPA (Seminario)	ESEPA
Universidad Adventista de Centroamérica	UNADECA
Universidad Bíblica Latinoamericana	UBL
Universidad Católica de Costa Rica	U Católica
Universidad Cristiana del Sur	SCU
Universidad de la Salle	U La Salle
Universidad Evangélica de las Américas	UNELA
Universidad Juan Pablo II	UJPII
Universidad Metodista	U Metodista

Table 38.

The first denominational university to be established was the Universidad Adventista de Centro América, in 1986, and the most recent was the Universidad Metodista, in 2001 (Table 39). Most institutions were founded in the 1990s. Every institution, except the Universidad Bíblica Latinoamericana, was legally constituted as a non-profit entity, either as an association or foundation. The Universidad Bíblica Latinoamericana is the only exception, as it was created as a corporation. Table 39.

Acronym	Legal structure	Year founded
UNADECA	Non-profit Association	1986
ESEPA	Non-profit Association	1989
UNELA	Non-profit Association	1992
U Católica	Non-profit Foundation	1993
U La Salle	Non-profit Association	1994
UJPII	Non-profit Foundation	1996
UBL	Corporation	1997
SCU	Non-profit Foundation	1998
U Metodista	Non-profit Association	2001

*Legal Structure and Year of Foundation of Denominational Universities* 

With the exception of the Universidad Católica, which is medium-sized, all other denominational institutions are small. The Universidad Católica is the only institution with more than one campus location: its main campus is in San José, but it also has four other locations in the rural townships of San Carlos, Ciudad Neilly, Pérez Zeledón, and Nicoya. Eight of the nine institutions have campuses in San José, and only one in the province of Alajuela.

ESEPA and the Universidad San Pablo II are two of the smallest institutions in the country: they did not award any degrees in 2007, even if they were founded more than a more than a decade ago, ESEPA in 1989 and the Universidad San Pablo in 1996. The Universidad Metodista had only three graduates that year, and the Universidad Evangélica de las Américas, 18. The Universidad Cristiana del Sur, which advertises online as the Southern Christian University to an English-speaking market (SCU, 2009),

graduated 39 students. Smaller institutions generally graduated a lesser percentage of their student population than larger institutions. A notable exception was the Universidad Adventista de Centro América, which graduated 25% of their student population that year, while La Salle graduated 11%, even when La Salle enrolled more than twice as many students (Table 40).

Table 40.

Acronym	Degrees	Enrollment	Ratio degrees to enrollment	Campus locations
U Católica	602	2,252	27%	5
U La Salle	101	945	11%	1
UBL	24	563	4%	1
UNADECA	107	421	25%	1
SCU	39	363	11%	1
UNELA	18	291	6%	1
U Metodista	3	0	0%	1
ESEPA	0	0	0%	1
UJPII	0	0	0%	1

Institutional Size of Denominational Universities, as to the Number of Degrees Awarded, Enrollment, Graduation Rates, and Number of Campus Locations

\*Missing data (in bold italics) was imputed with a regression equation, where y=4.537x+186.4

Larger institutions have more undergraduate and graduate programs than smaller institutions (Table 41). The Universidad Católica and the Universidad Adventista de Centro América have the greatest number of undergraduate programs. Denominational universities teach faith-related programs, mostly at the undergraduate level. Programs include Christian Education, Biblical Sciences, Transcultural Ministry, Pastoral Ministry, Theology, Ecclesiastic Resource Management, Family Orientation, Church Doctrine, Missiology, Religious Studies, Bible, the New Testament, and the Old Testament. However, they also teach programs such as Business Administration, Nursing, Information Systems Engineering, Psychology, Philosophy and Humanities, Law, and most specialties in the field of education. No denominational institution teaches medicine or other medical specialties beyond nursing. Denominational institutions offer 58% of the programs that were approved by CONESUP.

Acronym	Undergraduate programs offered	Undergraduate programs approved by CONESUP	Graduate programs offered	Graduate programs approved by CONESUP
U Católica	32	41	9	19
UNADECA	24	36	4	3
U La Salle	18	28	4	8
U Metodista	8	8	1	1
SCU	8	10	1	1
UNELA	6	5	6	6
UBL	4	4	2	3
UJPII	3	14	1	4
ESEPA	3	3	3	3

*Institutional Size of Denominational Universities, as to the Number of Programs Offered (2010)* 

Tuition for undergraduate courses range from ¢66,000 per course at the Universidad Adventista to ¢20,000 at the Universidad Cristiana del Sur. Only the Universidad Católica has two accredited programs with SINAES.

## Table 42.

Table 41.

Acronym	Accredited programs	Enrollment fee	Tuition per course
UNADECA	0	<b>Ø66,000</b>	¢66,000
U Católica	2	¢30,000	¢56,000
U La Salle	0	<b><i>¢</i>44,300</b>	¢55,700
UJPII	0	<b><i>¢</i>45,000</b>	¢50,000
ESEPA	0	<b><i>₡</i>16,500</b>	¢49,500
UBL	0	<b><i>©</i>28,132</b>	¢39,384
U Metodista	0	<b><i>©</i>24,500</b>	¢31,500
UNELA	0	<b>Ø</b> 8,250	<b><i>©</i>24,750</b>
SCU	0	¢15,000	¢20,000

*Number of Accredited Programs and the Costs of Tuition of Denominational Universities* 

The Universidad Católica, the Universidad La Salle, and the Universidad Adventista de Centro América have more student services than other denominational institutions, such as libraries, cafeterias, auditoriums, sports facilities, and free access to the Internet. The Universidad Adventista de Centro América is the only institution in its category with residence halls. The Universidad Católica has the only research program and the largest extension program in the category, and like the Universidad La Salle, has established agreements of cooperation with Catholic institutions in other countries.

## Private Special-Focus National Undergraduate Universities

Eleven private special- focus national undergraduate institutions offer programs in one discipline (Table 43). For instance, the Universidad Braulio Carrillo specializes in Customs Management. The Universidad Centroamericana de Ciencias Sociales specializes in Psychology, and the Universidad del Turismo and the Universidad Escuela Libre de Derecho, to the fields their names suggest: tourism and law, respectively. The Universidad Creativa and the Universidad Veritas are art and design schools, and the Universidad de Ciencias Médicas and the Universidad de Iberoamérica are medical schools. The Universidad San Marcos specializes in business and the Universidad Santa Paula, physical therapy. Lastly, the Universidad EARTH specializes in agronomic engineering. Despite being an international institution, it was classified in this category as it only offers one undergraduate program.

Table 43.

Universities	Acronym
Universidad Braulio Carrillo	U Braulio Carrillo
Universidad Centroamericana de Ciencias Sociales	UCACIS
Universidad Creativa	U Creativa
Universidad de las Ciencias Médicas	UCIMED
Universidad del Turismo	UTUR
Universidad Earth	EARTH
Universidad Escuela Libre de Derecho	UELD
Universidad de Iberoamérica	UNIBE
Universidad San Marcos	USAM
Universidad Santa Paula	USP
Universidad Véritas	U Véritas

Acronyms of Private Special-focus Undergraduate Universities

The oldest institution of the category is EARTH, an international non-profit university created by law with funds from the W.K. Kellogg Foundation, through the United States Agency for International Development (US AID) (Table 44). Seven other institutions were founded in the 1990s and three after 2000. The Universidad Veritas operated as a *parauniversitaria* since 1968, when it was known as the Instituto Técnico de Administración de Negocios (ITAN). In 1976, it became Collegium Veritas, a UACA institution, before it became independent in 1994. The Universidad Braulio Carrillo was founded by the Asociación Agentes de Aduanas and the Universidad de Iberoamérica was founded by Emma Grace Hernández, both in 1995. The Universidad en Ciencias Administrativas San Marcos began its operations as the Escuela de Comercio Manuel Aragón, the first private technical school in Costa Rica, founded in 1922. It operated under the UACA umbrella until 1996. Lastly, the Universidad del Turismo was founded by Ramón Madrigal, also in 1996. Information on other founders was publicly unavailable. Five institutions were legally structured as non- profit foundations and six as corporations. The youngest institution in the category is the Universidad Santa Paula. Table 44.

Acronym	Legal structure	Year founded
EARTH	Non-profit Foundation	1986
U Véritas	Corporation	1994
U Braulio Carrillo	Non-profit Foundation	1994
UNIBE	Non-profit Foundation	1995
USAM	Corporation	1996
UELD	Non-profit Foundation	1996
UTUR	Corporation	1996
UCIMED	Non-profit Foundation	1999
U Creativa	Corporation	2000
UCACIS	Corporation	2000
USP	Corporation	2001

*Legal Structure and Year of Foundation of Private Special focus Undergraduate Universities* 

Despite being the youngest institution, the Universidad Santa Paula reports the highest enrollment of the category, 2,609, and 432 degrees awarded (Table 45). The Universidad de Iberoamérica is the second largest, with an estimated population of 2,587 and 529 degrees awarded. The Universidad Veritas would be considered the third most numerous institution in terms of enrollment, but not in terms of graduates. The Universidad San Marcos graduated 431 students in 2007, more than three times as many graduates as the Universidad Veritas. Private special-focus national undergraduate institutions prefer having one campus location; the Universidad Creativa is the only exception, with two campuses.

## Table 45.

Acronym	Degrees	Enrollment	Ratio degrees to enrollment	Campus locations
USP	432	2,609	16.56%	1
UNIBE	529	2,587	20.45%	1
U Véritas	123	1,862	6.61%	1
UCIMED	277	1,472	18.82%	1
USAM	431	1,296	33.26%	1
UELD	164	930	17.63%	1
EARTH	98	413	23.73%	1
U Braulio Carrillo	40	367	10.90%	1
UCACIS	35	345	10.14%	1
UTUR	9	227	3.96%	1
U Creativa	1	0	0.00%	2

*Institutional Size of Special-focus National Undergraduate Universities, as to the Number of Degrees Awarded, Enrollment, Graduation Rates, and Number of Campus Locations* 

\**Missing data (in bold italics) was imputed with a regression equation, where y*=4.537*x*+186.4

The rates of degrees awarded to enrollment range from 0% at the Universidad Creativa, 3.96% at the Universidad del Turismo, and 6.61% at the Universidad Veritas, to 33.26% at the Universidad San Marcos. In the case of the first two institutions, low graduation rates might be considered a consequence of small student populations. In the case of Universidad Veritas, a plausible explanation could be rapidly increasing enrollment rates.

The Universidad San Marcos, Universidad Santa Paula, and the Universidad Veritas offer the most undergraduate programs, while the Universidad de Iberoamérica, the Universidad San Marcos, the Universidad Santa Paula, and the Universidad de Ciencias Médicas offer the most graduate programs (Table 46). As an oddity, the Universidad Veritas, which specializes in art and design, also operates a dental school, the Facultad Autónoma de Ciencias Odontológicas, as a completely separate entity, offering a *Licenciatura* in Dentistry, and a postgraduate degree in Maxillary Orthodontics and Orthopedics. These institutions only offer 60% of the programs that have been approved by CONESUP.

# Table 46.

*Institutional Size of Special-focus National Undergraduate Universities, as to the Number of Programs Offered (2010)* 

Acronym	Undergraduate programs offered	Undergraduate programs approved by CONESUP	Graduate programs offered	Graduate programs approved by CONESUP
USAM	10	12	3	4
USP	9	12	5	6
U Véritas	7	36	0	5
U Creativa	5	5	0	0
UCIMED	4	13	5	7
UNIBE	3	8	6	6
UTUR	2	3	0	0
U Braulio Carrillo	2	5	0	1
UELD	2	3	3	3
UCACIS	2	4	1	1
EARTH	1	NA	0	NA

\* NA: Not applicable, as it is a private autonomous institution.

The most expensive institution in the category is the Universidad de Ciencias Médicas, who charges an average of ¢319,000 a course (Table 47). The medical schools are the second most expensive types of institutions, followed by the institutions of art and design, the Universidad Creativa and the Universidad Veritas. On average, institutions in this category are charging ¢131,937.05 a course. Without including the international university and the medical schools, average tuition for a course drops to ¢67,801.67. The Universidad Braulio Carrillo is the least expensive institution in the category, charging ¢45,000 a course.

# Table 47.

Acronym	Accredited programs	Enrollment fee	Tuition per course
UCIMED	2	¢0	¢319,000
UNIBE	1	¢45,000	¢300,145
EARTH	1	¢0	¢289,749
U Véritas	3	¢59,220	¢133,340
U Creativa	0	¢48,500	¢75,000
UELD	0	¢56,121	¢65,573
UTUR	0	¢44,000	¢61,000
USAM	0	¢37,000	¢57,500
UCACIS	0	¢45,000	¢56,000
USP	0	¢43,000	¢49,000
U Braulio Carrillo	0	¢38,000	¢45,000

*The Number of Accredited Programs and the Costs of Tuition at Special-focus National Undergraduate Universities* 

Four institutions have accredited programs through SINAES; the Universidad Veritas has three programs accredited, the Universidad de Ciencias Médicas, two programs, and EARTH and the Universidad de Iberoamérica, one. All institutions with accredited programs are also the most expensive in their category, with the exception of the Universidad Creativa, which is the fourth most expensive institution but has no accreditations.

With regards to student services, the EARTH has the broadest variety, including student residence halls, a gymnasium, a student center and a student affairs department, a sports complex, a chapel, a library, a souvenir shop, a cafeteria, an auditorium, a Creative Expression Center, and a forest. The Universidad de las Ciencias Médicas has a library with electronic databases, access to a virtual learning environment, a student affairs department which oversees scholarships, health services, complaints, and recreational activities, student clubs, a computer lab with access to the Internet, publications, career services, and a cafeteria as well as recreational spaces for students. The other private university specialized in medical fields is UNIBE, who also offers many of the same services as the Universidad de Ciencias Médicas, as well as psychological counseling and career services. The Universidad Veritas has an ISO-certified library, publications, a student affairs department with psycho-educational, health, and recreational services for students, an auditorium, a study abroad office, access to a virtual learning environment, a cafeteria and computer labs. All other institutions only offer a library, computer labs with Internet access, and a cafeteria. The Universidad Santa Paula has these basic services, in addition to sports activities, a pool, and a magazine.

All universities with accredited programs in this category have significant extension programs, as well as the Universidad Santa Paula, the Universidad Creativa, and the Universidad San Marcos. Other institutions offer extension courses sporadically or not at all.

Institutions in this category seem to have multiple agreements of cooperation with international universities. EARTH sends its third year students to a fifteen-week study abroad program in one of 26 countries. The Universidad de Iberoamérica has agreements of cooperation with the Universidad de Salamanca, the Universidad de Alcalá de Henares, the University of Maryland, the Universitá degli Studi di Milano, the Universitá Di Padova, and Hadassah Medical Organization in Israel. The Universidad de las Ciencias Médicas has agreements with Hennepin County Medical Center and Kaplan Medical. The Universidad Véritas has over 35 agreements of cooperation in four continents. The Universidad Santa Paula has agreements with Winston-Salem State, the Universidad Central Marta Abreu de la Villas, the Kansas University, and the Universidad Católica de Valparaíso, while the Universidad del Turismo has established them with the Universidad Tecnológica Equinoccial and Life University.

### **Private Special-Focus International Graduate Universities**

The following institutions have been categorized as private special focus graduate universities, because they offer graduate programs almost exclusively (Table 48).

Actonyms of invate special-jocus Graduate Oniversities		
Universities	Acronym	
Centro Agronómico Tropical de Investigación y Enseñanza	CATIE	
Facultad Latinoamericana de Ciencias Sociales	FLACSO	
INCAE Business School	INCAE	
Instituto Centroamericano de Administración Pública	ICAP	
Universidad para la Cooperación Internacional	UCI	
Universidad para la Paz	UPEACE	

 Table 48.

 Acronyms of Private Special-focus Graduate Universities

The oldest university of the category is the Instituto Centroamericano de Administración Pública, an intergovernmental degree-granting institution in Central America (Table 49). It began operating in 1954 as the Escuela Superior de Administración Pública de América Central (ESAPAC), constituted by agreement between the governments of Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua. In 1967, encouraged by the United Nations Development Programme, the ESAPAC created ICAP. ICAP was authorized to operate in Costa Rica by Law No. 2829, with the objective of preparing the human resources required by the public sector in the region, to modernize the governmental administration of Central American nations, and to develop regional integration. The governing board of ICAP is integrated by the Ministers of Economy of participating countries. Table 49.

Acronym	Legal structure	Year founded
ICAP	international autonomous public organization	1954
FLACSO	International autonomous non- profit institution	1957
INCAE	International autonomous non- profit institution	1964
CATIE	International autonomous non- profit institution	1973
UPEACE	International autonomous non- profit institution	1980
UCI	Corporation	1994

*Legal Structure and Year of Foundation of Private Special focus Graduate Universities* 

FLACSO is the Facultad Latinoamericana de Ciencias Sociales, a regional autonomous organization, constituted by countries in Latin America and the Caribbean. It was created in 1957 and sponsored by UNESCO, to encourage teaching, research, and cooperation in the social sciences. FLACSO's Secretary General is located in Costa Rica, but FLACSO has geographic locations in Argentina, Brazil, Chile, Cuba, Ecuador, El Salvador, Guatemala, México and Dominican Republic. In Costa Rica, FLACSO has been operating as an academic site since 1997.

INCAE Business School was founded in 1964 as an initiative between the presidents of Central America and President John F. Kennedy in his visit to Costa Rica. Kennedy wrote George Baker, Dean of the Harvard Business School, asking him to consider the possibility of establishing a business program in Central America. On December 15 of 1963, the governing board of INCAE was established under the leadership of Francisco de Sola, a Salvadorean businessman, as President. The first

INCAE campus was built and inaugurated in Nicaragua in 1969. Due to political turmoil in Nicaragua in the late 1970's, the INCAE campus was relocated to Costa Rica, in 1982.

The CATIE, or Centro Agronómico Tropical de Investigación y Enseñanza, was an initiative of Henry Wallace, Secretary of Agriculture in the United States, who proposed the creation of an Inter-American institution that would help train personnel and undergo agricultural research. Costa Rica was chosen as the most appropriate setting for this organization, as it was strategically located between South and North America, and because it had the typical characteristics of American agriculture. The Institute was approved in 1942 by the Pan-American Union, now called the Organization of American States (OAS), and created by Costa Rican Law No. 29. CATIE has 14 regular members: the Instituto Interamericano de Cooperación para la Agricultura (IICA), Belize, Bolivia, Colombia, Costa Rica, El Salvador, Guatemala, Honduras, México, Nicaragua, Panama, Paraguay, Dominican Republic y Venezuela. CATIE signed an agreement in 2003 with the Costa Rican government for another 20 years, renewing its constitutive contract.

The University for Peace was founded in Costa Rica under the leadership of Costa Rican President Rodrigo Carazo, who encouraged the United Nations to create it in 1980. It was established in Costa Rica primarily due to the country's peaceful tradition: it had abolished the death penalty in 1882 and its army in 1948. The University for Peace focuses on education, training, and research on issues such as conflict prevention, human security, human rights, environmental security, and post- conflict rehabilitation.

The Universidad para la Cooperación Internacional is the only private specialfocus graduate university legally structured as a corporation; it is a proprietary institution owned by Eduard Müller, the youngest university in the class. Its programs are completely online or bimodal. All institutions in this category have only one campus location. Table 50.

Acronym	Degrees	Enrollment	Ratio degrees to enrollment	Campus locations
UCI	159	735	21.63%	1
UPEACE	132	198	66.67%	1
INCAE	101	179	56.42%	1
CATIE	62	157	39.49%	1
ICAP	21	NA	NA	1
FLACSO	38	45	84.44%	1

Institutional Size of Special-focus International Graduate Universities, as to the Number of Degrees Awarded, Enrollment, Graduation Rates, and Number of Campus Locations

Enrollment and graduation figures from the international non-profit institutions were difficult to estimate, as no public database or publication systematically collects or reports this information. Figures were collected from newsletters on specific graduation events and other publications. No data was publicly available on the enrollment at the Instituto Centroamericano de Administración Pública.

The Universidad para la Cooperación Internacional seems to have the largest enrollment as well as the highest number of degrees awarded, followed by the University for Peace and the INCAE Business School (Table 50). The percentage of degrees awarded in proportion to the student population is significantly higher at international non-profit institutions than at the Universidad para la Cooperación Internacional and even other national private universities in the country: 53.73%, possibly because other institutions offer full-time residential programs.

### Table 51.

Acronym	Undergraduate programs offered	Undergraduate programs approved by CONESUP	Graduate programs offered	Graduate programs approved by CONESUP
UCI	0	10	13	14
INCAE	0	NA	2	NA
CATIE	0	NA	9	NA
UPEACE	0	NA	13	NA
ICAP	0	NA	3	NA
FLACSO	0	NA	3	NA

*Institutional Size of Special-focus International Graduate Universities, as to the Number of Programs Offered (2010)* 

\* NA: Not applicable, as they are private autonomous institutions.

All programs in the category are offered at the graduate level (Table 51). UCI offers the greatest number of graduate programs, followed by the University for Peace. The Instituto Centroamericano de Administración Pública and the Facultad Latinoamericana de Ciencias Sociales have the least number of programs. INCAE has the only accredited program in the class: its MBA is accredited by the Southern Association of Colleges and Schools in the United States, by EQUIS, the European Quality Improvement System, and by AACSB, the Association to Advance Collegiate Schools of Business (Table 52).

## Table 52.

Universities		
Acronym	Accredited programs	Average Cost of Graduate Programs
INCAE	1	\$44,490
UPEACE	0	\$24,959
CATIE	0	\$16,730
FLACSO	0	\$6,950
UCI	0	\$6,500
ICAP	0	\$4,000

*The Number of Accredited Programs and the Costs of Tuition (USD) at Special-focus International Graduate Universities* 

The Universidad para la Cooperación Internacional undergoes research and extension projects in the fields of environmental conservation, human rights, mediation, development issues, and project management. As a university with virtual and bimodal education programs, its physical infrastructure is small, in comparison to other institutions in the category. However, it offers a wide variety of programs and professional training opportunities locally and internationally. It also holds agreements of cooperation with over 59 different international universities and non-governmental organizations. Students and alumni are offered career and other online services.

INCAE Business School carries out research projects through its six research centers: Centro de Investigaciones, Centro Latinoamericano para la Competitividad y el Desarrollo Sostenible, Centro para el Liderazgo de la Mujer, Centro de Empresarialismo Ing. Arnoldo Solórzano Thompson, Cátedra BATCCA (British American Tobacco Caribbean and Central America), and Cátedra Fundación Poma para la Superación de la Pobreza. It also offers a wide range of executive education programs, seminars, conferences, in-house workshops, and other extension activities. INCAE has residence halls, a library, and cafeteria services for students, as well as career services. It has 28 agreements of cooperation with national and international institutions.

At the Centro Agronómico Tropical de Investigación y Enseñanza (CATIE) researchers focus on the integration of technology in the organic production of agriculture, the development of alternative sources of plague control in banana plantations, and other comparative studies on conventional and organic systems. They undertake multiple research and extension projects in nine countries, and publish and sell their own books on agricultural topics. Student services include cultural activities, cafeterias, residence halls, career services, and sports facilities. CATIE has a student exchange program with Cornell University and has agreements of cooperation with nearly 30 international universities and non-governmental organizations for research and community service purposes.

The University for Peace has a wide extension program through the UPEACE Institute, as well as lectures, guided field visits, distance education, and exercises in land use and ecological appraisal, participatory approaches in community development, a large environmental conflict simulation game, and other simulations in environmental issues. It also has a Center for Executive Education which provides seminars and workshops to the local and international community. The University for Peace has residence halls and a library, but no other student services are reported.

The Instituto Centroamericano de Administración Pública undergoes research projects on public administration in Central America and provides consulting services for member countries. It also organizes professional training programs and publishes didactic materials and a periodical journal. It also offers a virtual library service, but like the University for Peace, information on other student services is not available.

Lastly, the Facultad Latinoamericana de Ciencias Sociales, researchers publish multiple articles and books in the fields of the social sciences. They also organize internationally-oriented academic events throughout the year and offer research services through a documentation center. FLACSO also has multiple international agreements of cooperation with national and international entities. It offers students a computer laboratory. No information is available on other student services or institutional infrastructure.

### A Synthesis

There are significant differences in universities by type. For instance, public institutions and private international graduate institutions were founded many years before private national institutions, earning the former their national reputation. They receive significant public and private funds with which to operate, allowing them to heavily subsidize the educational services they provide and still invest on infrastructure, curricular design, student services, research, extension, and other activities. Thus, it is understandable that public institutions have the most enrollments, graduates, campus locations, academic programs, student services, extension programs, and research centers (Table 53) and that private international graduate institutions have high graduation rates, successful research and extension programs, publications, and top quality learning facilities.

### Table 53.

Institutional Types	Degrees	Enrollment	Ratio degrees to enrollment	Campus locations
Public universities				
	2,603	18,580	15.29%	14
Private Large Comprehensive				
Universities	1,664	8,910	18.27%	6
Private Medium Comprehensive Universities	662	2,773	24.30%	5
Private Small Comprehensive Universities	90	510	21.81%	2
Denominational	99	537	9.34%	1
Special-Focus National Undergraduate Universities	194	1,101	14.73%	1
Special-Focus International Graduate				
Universities	86	263	53.73%	1

*Size of Institutions, as to the Average Number of Degrees Awarded, Enrollment, Graduation Rates, and Number of Campus Locations* 

In contrast, most private national universities are relatively new, small, inexpensive, fund-deprived proprietary institutions which have sought to increase their revenue by improving their enrollment figures. With little experience and reputation to speak of, most institutions were forced to grow by opening as many campuses and academic programs as possible, and charging relatively low tuition fees. The strategy worked for a number of institutions, as is evident in the data presented: private large and medium institutions have the most campus locations (Table 53) and academic programs (Table 54), as well as the highest enrollments and tuition fees (Table 55).

## Table 54.

Institutional Types	Undergraduate programs offered	Undergraduate programs approved by CONESUP	Graduate programs offered	Graduate programs approved by CONESUP
Public universities	92	NA	85	NA
Private Large Comprehensive Universities	36	74	12	27
Private Medium Comprehensive Universities	25	44	7	11
Private Small Comprehensive Universities	12	14	3	3
Denominational	12	17	3	5
Special-Focus National Undergraduate Universities	4	10	2	3
Special-Focus International Graduate Universities	0	10	7	14

*Institutional Size, According to the Average Number of Programs Offered* (2010)

Small private institutions were faced with a dilemma: whether to walk in the footsteps of other universities and grow by opening new campuses and academic programs or opt instead for a strategy based on differentiation. A few small private institutions decided to specialize their academic offering around one discipline, while others decided to pursue the more familiar route to growth. Apparently, special-focus national undergraduate universities have been more successful in securing their financial sustenance, despite having fewer programs and campuses: they have greater enrollments (Table 53) and charge their students higher tuition fees than private small universities and denominational institutions (Table 55). What is more, four special-focus national undergraduate universities were able to accredit the quality of several of their programs, while not one small comprehensive institution was able to do the same.

Institutional Types	Accredited programs	Enrollment fee	Tuition per credit, course, or program*	
Public universities	9.50	<b>Ø</b> 5,280	¢13,800	
Private Large Comprehensive Universities	0.60	¢52,548	¢61,760	
Private Medium Comprehensive Universities	0.27	<b><i>¢</i>44,546</b>	<b>Ø48,852</b>	
Private Small Comprehensive Universities	0.00	<b>Ø36,864</b>	¢39,655	
Denominational	0.22	¢30,854	₡43.648	
Special-Focus National Undergraduate Universities	0.27	₡37,804	¢131,937	
Special-Focus International Graduate Universities	0.17	NA	\$17,271.50	

Table 55.The Average Number of Accredited Programs and the Costsof Tuition

#### **CHAPTER 3. STUDENT CHARACTERISTICS AND DIFFERENCES**

The purpose of the second stage of the study was to determine whether there are any differences in the characteristics of students by institutional type, public or private. 1,138 undergraduate students enrolled in bachelor and *licenciatura* (equivalent to fifth year undergraduate) programs all over the country, were surveyed about their academic preparation, socioeconomic status, motives for college choice, and demographics. Specifically, participants were asked about the major in which they decided to enroll, their highest academic degree, as well as their mother's, father's, and siblings' highest academic degree. They were asked about the type of high school they attended, their academic performance and academic motivation while in high school. About college, they were asked about their enrollment habits, the reasons for enrolling in their major, the institutions in which they had enrolled before, the motives for leaving those institutions, the reasons for choosing their current institution, and their current levels of satisfaction. They were asked demographic information about their age, gender, place of residence, ethnic group, marital status, number of children, and special learning needs or disabilities. With regards to socio-economic status, participants were asked whether they work, their personal and family income, the number of dependents, their sources of funding for college, and their willingness to acquire debt to finance their college education. To ensure confidentiality, no identifiers were obtained.

Anticipating that sub-populations could vary considerably, the sample was stratified to reduce sampling error (Table 56). Participants were enrolled at 15 institutions, on different types of campuses: an urban campus of a public comprehensive university; a rural campus of another public comprehensive university; a rural campus of another public comprehensive university; a rural campus of a technology-focused public university. Participants were also surveyed on the campuses of private universities. These campuses were urban and rural; they belonged to large (more than 5,000 students), medium (more than 1,000 and less than 5,000), and

small institutions (less than 1,000 students); and to comprehensive and special-focus institutions. Campuses were picked non-randomly, to guarantee that all institutional types were represented.

Institutions at Which Respondents	s Were Enrolled	
Institution	Туре	n
Universidad de Costa Rica (Ciudad Universitaria Rodrigo Facio)	Public comprehensive urban campus	79
Universidad Nacional (Liberia)	Public comprehensive rural campus	78
Universidad Nacional de Educación a Distancia (Palmares)	Public distance education	77
Instituto Tecnológico de Costa Rica (Cartago)	Public specialized in technology	77
Universidad Interamericana (Heredia)	Private large comprehensive urban campus	84
Universidad Latina (Limón)	Private medium comprehensive rural campus	76
Universidad Hispanoamericana (Llorente de Tibás)	Private medium comprehensive urban campus	77
Universidad Internacional San Isidro Labrador (Pérez Zeledón)	Private medium comprehensive rural campus	75
Universidad San Marcos (San José)	Private small comprehensive urban campus	75
Universidad de las Ciencias y el Arte de Costa Rica (Esparza)	Private small comprehensive rural campus	63
Universidad de Ciencias Médicas (San José)	Private specialized in medicine	75
Universidad Veritas (San José)	Private specialized in design	76
Universidad Escuela Libre de Derecho (San José)	Private specialized in law	75
Universidad Católica de Costa Rica (San José)	Private denominational	75
Universidad Santa Paula (San José)	Private specialized in therapy	76
	TOTAL	1,138

Table 56.

Convenience sampling was used, as the researcher had no access to the lists of students at each institution nor to the number of students enrolled at each campus for the purposes of random selection. The sample reflects the distribution of the total student population enrolled in each sector: 72.67% was enrolled at private universities and 27.33% at public universities. Interviewers selected and trained by CID- Gallup asked questions and recorded answers using a structured survey, in- person, in public spaces near or at these college campuses. Thirty-three percent of the sample was interviewed from 8 a.m.- 12 p.m., another third in the afternoon, from 12 p.m. to 6 p.m., and the last third, from 6 p.m. to 9 p.m. Supervisors oversaw the data collection process to ensure quality. Descriptive and inferential statistics were generated using Excel. The results of the survey have a margin of error of plus or minus 2.91% at the 95% level of confidence.

Eighty- two point six percent were enrolled in bachelor programs, and 17.4% in *licenciatura* programs. Fifty- four point ninety- two percent of the sample was female and 45.08% male. The list of institutions and the sample size per institution is found in Table 56. This chapter presents the results of the survey on the characteristics of students who are enrolled in higher education in Costa Rica. For the purpose of clarity, data was classified according to the funding structure of institutions in which they are enrolled, public and private. Then, institutional differences within each of the two classifications are explored.

### Differences in the Demographic Characteristics of Students

No differences were observed in the ethnic composition of the student populations surveyed at public and private institutions. Forty-four point seventythree percent of the population was from mestizo background, 51.32% White, 0.35% Chinese, 0.09% Amerindian, and 3.51% Black or Mulatoe. However, Costa Rica's ethnic composition is 96% White (including mestizo), 3% Black, 1% Amerindian, 1% Chinese, and 1% from other ethnic backgrounds, which means than the Chinese and Amerindian populations are underrepresented in higher education (Table 57).

The Ethnic Background of Students in Higher Education						
	Mestizo	White	Chinese	Amerindian	Black/Mulatoe	
Costa Rica	96	6.00%	1.00%	0.01%	0.03%	
Students of Higher Education	44.73%	51.32%	35.00%	0.09%	3.51%	

 Table 57.

 The Ethnic Backaround of Students in Higher Education

The student population surveyed is very homogeneous, not only in terms of ethnic background, but also in terms of nationality: only 2.28% are citizens of other countries, namely Nicaragua and Colombia. Both public and private institutions have the same percentage of international students.

Only 1.14% of the student population reports some sort of disability or disorder; 30.77% of which has Attention Deficit Hyperactivity Disorder (ADHD). Costa Rica's disabled population, according to the national census, is estimated at 5.3% (INEC, 2000); thus, the disabled population is underrepresented in higher education. The problem is evident in both the public and the private sectors.

The most significant demographic difference between undergraduate students enrolled in public and private institutions surveyed is age. In general, a majority of students are 18-24 years of age (82.60%). Eleven point zero seven percent are 25 to 29 years of age, and only 6.32% are 30 years or older. However, students in public higher education are much younger than students in private higher education: 92.28% of students in public higher education are 18 to 24 years of age, while only 78.96% of students in private higher education are 18 to 24 (Table 58).

Age	Private	Public	Grand Total	
18-24		78.96%	92.28%	82.60%
25-29		13.42%	4.82%	11.07%
30-34		3.87%	1.29%	3.16%
35-39		1.81%	0.64%	1.49%
40 y+		1.93%	0.96%	1.67%
Grand Total		100.00%	100.00%	100.00%

 Table 58.

 The Ages of Students in Higher Education

## Differences in the Socioeconomic Status of Students

# Educational Level of Parents

Undergraduate students surveyed are mostly first-generation, meaning that they are first in their families to enroll in tertiary education: only 32.34% of mothers (Table 59) and 26.89% of fathers (Table 60) have college degrees. Parents of students in public universities have higher educational levels, as 44.05% of mothers and 34.41% of fathers have a college degree, while only 27.93% of mothers and 24.06% of fathers of students in private universities do. In both cases, mothers have higher levels of education than fathers.

#### Table 59.

Mother's Highest Academic Degree

Educational Level	Private	Public	Total
Concluded Primary	35.91%	18.97%	31.28%
Concluded Secondary	26.00%	26.69%	26.19%
Technical	3.63%	2.89%	3.43%
Professoriate	0.73%	0.96%	0.79%
Associate	0.60%	1.61%	0.88%
Bachelor	8.59%	14.47%	10.19%
Licenciatura (Fifth- Year Undergraduate)	13.91%	20.26%	15.64%
Professional Specialty	1.33%	1.61%	1.41%
Master	3.75%	5.79%	4.31%
Doctorate	0.36%	1.93%	0.79%
Does not have mother/Does not know	5.20%	4.82%	5.10%
Total	100.00%	100.00%	100.00%

Educational Level	Private	Public	Total
Concluded Primary	31.80%	21.22%	28.91%
Concluded Secondary	20.68%	17.36%	19.77%
Technical	4.72%	2.89%	4.22%
Professoriate	0.48%	1.61%	0.79%
Associate	8.46%	13.18%	9.75%
Bachelor	0.73%	2.57%	1.23%
Licenciatura (Fifth-Year Undergraduate)	1.69%	3.22%	2.11%
Professional Specialty	15.24%	19.29%	16.34%
Master	5.44%	9.00%	6.41%
Doctorate	0.97%	0.32%	0.79%
Does not have father/Does not know	9.79%	9.32%	9.67%
Grand Total	100.00%	100.00%	100.00%

Table 60.Father's Highest Academic Degree

## Students Who Work

Thirty-seven point seventeen percent of students surveyed work, but more students in private universities work than students in public universities: only 18.97% of those in public institutions work, in contrast to 44.01% in private institutions. Students who work do so mostly full-time (55.56%). Students at private universities work more on a full-time basis (58.52%) than students at public universities (37.29%). Most students who work (73%) make less than 300,000 colones a month.

## Family Monthly Income

In terms of the family's total monthly income, 66.43% of students in higher education have families with incomes in the highest two quartiles and 12.13% of the total student population has families with incomes in the lowest two quartiles, indicating that low-income students are highly underrepresented in higher education (Table 61). Furthermore, 37.73% of students in private higher education have families with incomes in the lowest three quartiles, in contrast to public higher education, where only 22.51% have families with incomes in that bracket.

Income levels	Private	Public	Total
Less than 100.000 colones	4.59%	1.93%	3.87%
Between 101.000 y 200.000 colones	9.19%	5.79%	8.26%
Between 201.000 y 300.0000 colones	11.85%	8.36%	10.90%
Between 301.000 y 400.000 colones	12.09%	6.43%	10.54%
Between 401.000 y 500.000 colones	10.40%	10.29%	10.37%
Between 501.000 y 600.000 colones	13.54%	13.18%	13.44%
More than 600.000 colones	32.53%	32.80%	32.60%
Does not say	5.80%	21.22%	10.02%
Total	100.00%	100.00%	100.00%

Table 61.Family's Total Monthly Income

Differences in between sectors with respect to the number of persons with remunerated work in the household are negligible. Most families have two people in their households with remunerated work (41.30%) and others have one person (31.11%) who provides the family income. Twenty-three point two percent have three or more than three people who contribute to the family income. Half of the families (50%) depend on their father's income, and a fifth of the families (19.95%) depend on the income of both parents.

Most students do not have dependents on their income (64%). However, 17.49% of the student population has one dependent, and another 17.73% has more than one dependent. Thirty-seven point zero nine percent of students in private higher education have dependents, in contrast to 25.42% of students in public higher education. Furthermore, most students in higher education are single (89.72%), but 95.18% of students in public universities are single, in comparison to 87.67% in private universities. Eighty-four point twenty-eight percent of students in private institutions do not have children, in comparison to 92.28% in public institutions.

#### Funding for College

Parents are the primary source of funding for students (55.01%) followed by the students themselves (25.75%) (Table 62). Only 5.62% indicated having a CONAPE loan.

An equal percentage of students in the public and private sector had institutional scholarships. More students in the public sector (68.81%) rely on their parent's income for their studies than students in the private sector (49.82%), and more than twice as many students in the private sector pay for their own college studies.

Primary Source of Funding for College Studies				
Source of funding	Private	Public	Total	
Parents	49.82%	68.81%	55.01%	
Student	30.71%	12.54%	25.75%	
Institutional Scholarship	11.61%	11.25%	11.51%	
CONAPE Loan	5.20%	6.75%	5.62%	
Spouse or Partner	2.42%	0.64%	1.93%	
Other	0.24%	0.00%	0.18%	
Total	100.00%	100.00%	100.00%	

 Table 62.

 Primary Source of Funding for College Studies

#### **Differences in the Academic Profile of Students**

#### High Schools from Which They Graduated

Most students in college graduated from public high schools (64.24%) while 30.85% graduated from private and private subsidized institutions (Table 63). More than twice as many students from private high schools attend public universities (51.44%) than private universities (23.09%). If only 9% of all high school students are enrolled in private high schools (CONARE, 2008), then students from public high schools are highly underrepresented in higher education.

Four point ninety-two percent of students in college obtained their high school diploma by passing general education development tests. Interestingly, 6,727 students passed the general education development tests in 2010, equivalent to 1.98% of the total enrollment in high schools, which means that graduates of these programs have equitable access to higher education.

High School Sector from which Higher E	aucation Studer	its Graauat	еа
Sector	Private	Public	Total
Public	71.46%	45.02%	64.24%
Private	19.95%	44.37%	26.63%
Private Subsidized	3.14%	7.07%	4.22%
General Education Development Tests	5.44%	3.54%	4.92%
Other	100%	100%	100%

Table 63. Liab School Sector from Which Higher Education Students Craduated

The vast majority of students graduated from local high schools: only 2.2% of the student population graduated from foreign high schools. Eighty point sixtyseven percent graduated from academic high schools, while 12.83% graduated from technical schools and 1.58% from scientific high schools (Table 64). Three times as many students from technical high schools attend private universities over public universities, while 12.88% more graduates from academic high schools attend public institutions.

Type of High School Attended by Students of Higher Education			
Type of High School	Private	Public	Total
Academic	77.15%	90.03%	80.67%
Technical	15.84%	4.82%	12.83%
GED Tests	5.44%	3.54%	4.92%
Scientific	1.57%	1.61%	1.58%
Total	100.00%	100.00%	100.00%

Table 64.

Additionally, the private higher education sector attracts more students who obtained their high school diploma through general education development tests and students who graduated from night schools (Table 65).

	Private	Public	Total
Day School	89.12%	95.18%	90.77%
Night School	5.44%	1.29%	4.31%
General Education Development Tests	5.44%	3.54%	4.92%
Total	100.00%	100.00%	100.00%

 Table 65.

 Type of Hiah School (Dav/Night)

## Grades They Obtained

In terms of academic performance, most students (58.26%) say that they typically obtained scores between 85% and 94% while in high school (Table 66). Another 31.90% say they obtained scores between 75% and 84%. Only 6.85% indicated to have obtained grades above 95%.

Table 66. *Typical Grades Obtained in High School by College Students* **Scores** Private Public Total 2.66% 3.86% 2.99% Between 65% y 74% 29.99% 36.98% 31.90% Between 75% y 84% 58.26% 60.58% 52.09% Between 85% y 94% 6.77% 7.07% 6.85% 95% and higher 100.00% 100.00% 100.00% Total

Interestingly, 67.35% of students in private universities report having obtained scores above 85% while in high school, in comparison to 59.16% of their counterparts at public institutions. They also failed a course more often (20.80%) than students from public universities (17.36%). Only 11.08% of the student population considered that getting good grades in their high schools was difficult. Forty percent of students at private universities indicated that obtaining grades in high school was easy, while 32.48% of students at public universities provided the same response.

The pattern repeats itself when asked about their typical grades in college: 61.91% of students at private universities obtained grades above 85% while only 45.98% of students at public universities did (Table 67). Thirty-seven point zero eight percent of the entire population reports having failed a college course at least once. Forty-four point thirty-seven percent of students at public universities had failed a course at least once, while only 34.34% of students at private universities had. When asked about their performance with regards to other classmates, half of the students in higher education considered themselves average (53.16%) while 43.5% considered themselves above average. Only 10.28% indicated to be way above average.

Public Total Scores Private Between 65% y 74% 6.05% 7.40% 6.41% Between 75% y 84% 32.04% 46.62% 36.03% Between 85% y 94% 55.86% 41.48% 51.93% 95% and higher 6.05% 4.50% 5.62% Total 100.00% 100.00% 100.00%

Typical Grades Obtained in College

Table 67.

#### English Language Competencies

With regards to English language instruction, only 33.74% of students considered their abilities in this foreign language to be very good or excellent (Table 68). More students in private higher education (34.70%) than in public higher education (19.29%) believe their English skills to be fair or poor and twice as many students in public higher education deem their English skills to be excellent. This finding is interesting, considering that a study of employers (Cox & Alvarado, 2003) deemed the English skills of private higher education graduates better than the skills of public higher education graduates.

Level	Private	Public	Total
Poor	19.23%	9.65%	16.61%
Fair	15.48%	9.65%	13.88%
Average	36.52%	33.76%	35.76%
Very Good	22.37%	31.19%	24.78%
Excellent	6.41%	15.76%	8.96%
Total	100.00%	100.00%	100.00%

 Table 68.

 Ability to Speak English of Students of Higher Education

#### Differences in Enrollment Trends and Motives for College Choice

Sixty-nine point zero seven percent of students took less than a year to enter college upon graduating from high school, while 16.70% took about a year and 13.88% took longer. More students at public universities (73.63%) than private universities (67.35%) entered college within the year. Those who did not enter college immediately after high school indicated they had to work to save money to pay for college: more students in the private sector (36.36%) had to work than students in the public sector (29.27%). Fifteen point eighty-five percent of students did not enter college within a year because they wanted to take a break from school and another 13.87% wanted to gain work experience.

Most students (35.94%) were enrolled in academic programs in the fields of the social and economic sciences (Table 69). An equal percentage of students was enrolled in programs of engineering (18.19%) and education (18.01%). Health science is the fourth largest field of study (14.67%). Only 6.85% is enrolled in programs in the fields of arts, letters, and philosophy, and 1.05% in the basic sciences.

There were more than three times as many students enrolled in social and economic science-related fields in the private sector (44.26%) than in the public sector (13.83%), and seventeen times as many students enrolled in the fields of health in the public sector (46.62%) than in the private sector (2.66%). Also, there were twice

as many students of engineering and education in the private sector than in the public sector. The public sector has approximately twice as many students in the arts, letters, and philosophy, natural resources, and basic sciences than the private sector.

Table 69.

Types of Programs in Which Students of Higher Education are Enrolled				
Type of Program	Private	Public	Total	
Social and Economic Sciences	44.26%	13.83%	35.94%	
Education	21.64%	9.00%	18.19%	
Engineering	20.68%	10.93%	18.01%	
Health	2.66%	46.62%	14.67%	
Arts, Letters, and Philosophy	4.59%	12.86%	6.85%	
Natural Resources	4.72%	4.82%	4.75%	
Basic Sciences	0.85%	1.61%	1.05%	
Does not know/Another	0.60%	0.32%	0.53%	
Total	100.00%	100.00%	100.00%	

Many more women opt for programs in Education, Health, while more men opt for Engineering and Basic Science programs (Table 70).

by Gender			
Type of Program	Female	Male	Total
Social and Economic Sciences	35.20%	36.84%	35.94%
Education	26.08%	8.58%	18.19%
Engineering	8.96%	29.04%	18.01%
Health	17.60%	11.11%	14.67%
Arts, Letters, and Philosophy	6.08%	7.80%	6.85%
Natural Resources	5.12%	4.29%	4.75%
Basic Sciences	0.80%	1.36%	1.05%
Does not know/Another	0.16%	0.97%	0.53%
Total	100.00%	100.00%	100.00%

Table 70.Types of Programs in Which Students of Higher Education are Enrolled,by Gender

Eighty-nine point fifty-four percent of students were enrolled in their program of choice. Those who were not in their program of choice stated that the one they preferred was not available at their university (42.02%); they were not admitted to the program of choice (26.05%); their program of choice was too expensive (8.4%); or that their family had other expectations of them (7.56%).

Sixty- four point twenty- four percent of students preferred enrolling all quarters and most enroll four courses. Students at private universities tend to enroll more courses, as 51.99% indicate enrolling five or more than five courses per term, while only 39.55% of students in public universities stated doing the same (Table 71).

The Number of Courses Students Enroll per Term				
Number of courses	Private	Public	Total	
One	1.09%	1.61%	1.23%	
Two	2.78%	4.82%	3.34%	
Three	8.83%	14.47%	10.37%	
Four	35.31%	39.55%	36.47%	
Five	38.33%	25.08%	34.71%	
More than five	13.66%	14.47%	13.88%	
Total	100.00%	100.00%	100.00%	

 Table 71.

 The Number of Courses Students Enroll per Ter

Thirty point forty percent of the general student population stated to have enrolled at other colleges before the current one. Thirty-one point thirty-two percent of students in private universities had attended another institution, while fewer students at public institutions (27.97%) had. Most (83.82%) had attended just one college prior, and 14.16% had attended two. Only 2.02% had attended more than two institutions. Students currently at private institutions had mostly attended the Universidad Estatal a Distancia (26.25%) and the Universidad de Costa Rica (22.01%). Students currently at public institutions had also mostly attended the Universidad de Costa Rica (29.59%) and the Universidad Estatal a Distancia (19.54%), suggesting high attrition rates from these two institutions.

The principal reasons why students left their previous institutions, besides having graduated from another program, are the high costs of education, conflicts with course scheduling and work responsibilities, and poor teacher quality (Table 72). Costs seemed to be the worst difficulty for students currently in private higher education (15.44%), while course scheduling (29%) seemed to be the worst problem for students currently enrolled in public higher education.

	Private	Public	Total
The program ended	20.85%	13.79%	19.08%
High Costs of Education	15.44%	12.64%	14.74%
Scheduling Conflicts with Work	11.20%	25.29%	14.74%
Poor Teacher Quality	12.36%	17.24%	13.58%
Long program Duration	11.58%	10.34%	11.27%
Family Commitments	6.18%	3.45%	5.49%
Distance from home or work	6.56%	1.15%	5.20%
Won't Respond	7.72%	10.34%	8.38%
Other	2.70%	3.45%	2.89%

Table 72.Reasons Why Students Left Previous Institution

Most students select their institutions based on reputation (48.24%) followed by the availability of the program (18.45%). Costs (34%) and teacher quality (12.67%) were mentioned as second reasons. Seventy-one point eighteen percent of the student population is satisfied with the education they receive in higher education, although students at public institutions seem 10.46% more satisfied than students at private institutions (Table 73). Perhaps cost is an important source of difference: 19.35% of students in private higher education indicate that they receive less quality for the money they pay, in contrast to 13.18% of students in public education.

Table 73.			
<b>Overall Satisfaction</b>	with Universitie	25	
Score	Private	Public	Total
Below 70%	31.68%	21.22%	28.82%
Higher than 70%	68.32%	78.78%	71.18%
Total	100.00%	100.00%	100.00%

#### **Institutional Differences**

#### Differences between Public Universities

While there are clear differences between students who are enrolled in the public and the private sectors, there are also considerable disparities within each sector. For instance, in terms of the socioeconomic profile of students in public higher education, the difference between the population at the Universidad de Costa Rica and other institutions is notable: 63.29% of students have family incomes in the two top quartiles, while at the Universidad Estatal a Distancia, only 14.29% of students have family incomes in that bracket (Table 74). The Instituto Tecnológico and the Universidad Nacional also have students with much lower income levels than the students at the Universidad de Costa Rica.

Table 74.

*Family's Total Monthly Income Above* 400,000 Colones at Public Institutions (As Percent of Student Population)

ITCR Cartago Campus	48.05%
UCR Main Campus	63.29%
UNA Liberia Campus	28.21%
UNED Palmares Campus	14.29%

There are important differences in the educational levels of parents as well. In this regard, students at the Universidad de Costa Rica and the Instituto Tecnológico have twice as many parents with higher education degrees than students at the Universidad Nacional, and five times more than students at the Universidad Estatal a Distancia (Tables 75 and 76). Table 75.

Mother Has a College Degree (As
Percent of Student Population in
Public Higher Education)

ITCR Cartago Campus	32.50%
UCR Main Campus	31.60%
UNA Liberia Campus	16.70%
UNED Palmares Campus	6.50%

## Table 76.

Father Has a College Degree (As Percent of Student Population in Public Higher Education)

ITCR Cartago Campus	33.77%
UCR Main Campus	35.44%
UNA Liberia Campus	15.38%
UNED Palmares Campus	7.79%

The Universidad de Costa Rica and the Instituto Tecnológico also have the most students who graduated from private high schools (Table 77). The differences with the other institutions are considerable.

Table 77.	
<i>Percent of Students at Public Universities who Graduated from Private High Schools</i>	
ITCR Cartago Campus	48.05%
UCR Main Campus	63.29%
UNA Liberia Campus	28.21%
UNED Palmares Campus	14.29%

Student characteristics also differ in terms of academic performance. Eightyseven point thirty-five percent of students at the Universidad de Costa Rica score grades over 85%, while only 49.35% of students at the Universidad Estatal a Distancia do. The differences are also substantial with the Instituto Tecnológico and the Universidad Nacional (Table 78).

# Table 78.

*Grades Above 85% in College of Students in Public Higher Education* 

ITCR Cartago Campus	75.32%
UCR Main Campus	87.34%
UNA Liberia Campus	69.23%
UNED Palmares Campus	49.35%

## Differences between Private Universities

Differences between institutions in the private sector are also important: for instance, 82.32% of students at USAM has family incomes over 400,000 colones, while nearly half (38.16%) of students at the Universidad Latina Limón and at the Universidad Internacional San Isidro Labrador in Pérez Zeledón do (38.67%) (Table 79).

Table 79.	
Family's Total Monthly Income Above 400,000 Colones at	
Private Institutions (As Percent of Student Population)	
Libre de Derecho	77.33%
Santa Paula	52.63%
UCIMED	74.66%
UNICA	82.54%
Universidad Católica	61.33%
Universidad Hispanoamericana Sede Llorente de Tibás	55.84%
Universidad Interamericana Heredia	58.33%
Universidad Internacional San Isidro Labrador Pérez Zeledón	38.67%
Universidad Latina Limón	38.16%
USAM San José	82.67%
Veritas	76.32%

The education of parents also varies enormously within institutions in the private sector. Students at institutions like the Universidad de Ciencias Médicas and the Universidad Veritas have 66.70% and 65.80% of mothers with college degrees, whereas only 6.6% of students at the Universidad Internacional San Isidro Labrador have mothers with a college degree (Table 79). Consistently, 73.33% of students at the Universidad de Ciencias Médicas and 88.73% of students at Universidad Veritas have fathers with college degrees, whereas 6.7% of students at the Universidad Internacional San Isidro Labrador have fathers with college degrees (Table 80).

## Table 80.

*Mother Has a College Degree (As Percent of Student Population in Private Higher Education)* 

Lihar de Denseler	40 70%
Libre de Derecho	42.70%
Santa Paula	26.30%
UCIMED	66.70%
UNICA	28.60%
Universidad Católica	32.00%
Universidad Hispanoamericana Sede Llorente de Tibás	24.70%
Universidad Interamericana Heredia	40.50%
Universidad Internacional San Isidro Labrador Pérez Zeledón	6.70%
Universidad Latina Limón	25.00%
USAM San José	26.70%
Veritas	65.80%

Libre de Derecho	60.00%
Santa Paula	30.26%
UCIMED	73.33%
UNICA	22.22%
Universidad Católica	41.33%
Universidad Hispanoamericana Sede Llorente de Tibás	31.17%
Universidad Interamericana Heredia	41.66%
Universidad Internacional San Isidro Labrador Pérez Zeledón	8.00%
Universidad Latina Limón	23.68%
USAM San José	25.33%
Veritas	68.42%

**Table 81.**Father Has a College Degree (As Percent of Student Populationin Private Higher Education)

There are notable differences in the percent of students surveyed at private universities who graduated from private high schools (Table 81). A large majority of students at the Universidad de Ciencias Médicas (84%) and the Universidad Veritas (88.73%) graduated from private high schools, whereas institutions like the Universidad de las Ciencias y el Arte has practically no students who graduated from private high schools. Table 82.

Table 83.

Libre de Derecho	36.61%
Santa Paula	31.88%
UCIMED	84.00%
UNICA	0.00%
Universidad Católica	34.66%
Universidad Hispanoamericana Sede Llorente de Tibás	33.33%
Universidad Interamericana Heredia	31.25%
Universidad Internacional San Isidro Labrador Pérez Zeledón	8.69%
Universidad Latina Limón	16.21%
USAM San José	10.29%
Veritas	88.73%

*Percent of Students at Private Universities who Graduated from Private High Schools* 

Academic performance is somewhat variable in private higher education (Table 82). 76% of students at the Universidad Libre de Derecho and 73.33% of students at the Universidad de Ciencias Médicas obtain grades above 85% in college, while only 42.11% of students at the Universidad Santa Paula obtain the same grades.

<i>Grades Above 85% in College of Students in Private Higher</i> <i>Education</i>	
Libre de Derecho	76%
Santa Paula	42.11%
UCIMED	73.33%
UNICA	51.32%
Universidad Católica	60%
Universidad Hispanoamericana Sede Llorente de Tibás	72%
Universidad Interamericana Heredia	69.05%
Universidad Internacional San Isidro Labrador Pérez Zeledón	72%
Universidad Latina Limón	65.79%
USAM San José	65.33%
Veritas	51.31%

#### **CHAPTER 4. CONCLUSIONS**

Costa Rica's higher education institutions are diverse and dynamic, despite the country's small size and the regulatory authority's influence on the private higher education system. Students and their parents have an ample list of options from which to choose, between large, medium or small institutions, public or private, urban or rural, national or international, comprehensive or specialized, denominational or non-denominational, and even between the more or less affordable. Institutions are so dissimilar, that even when grouped by size and the nature of their academic programs, significant differences still become apparent. A case in point: public universities do not share many attributes with each other, nor do private universities, which is why generalizing about the structural characteristics of public and private institutions beyond their funding structure can be misleading.

Funding is the most important source of differentiation between sectors, and even between institutions. While private universities in Costa Rica share many of the same responsibilities as public institutions, private universities must finance their own subsistence, charging their students for any costs related to their studies. Private universities must establish a delicate balance between the fees they set, the number of students they recruit, and the expenses and investments in which they can incur, as an error in any of these estimates could easily lead to an institution's demise. In contrast, public institutions have available government appropriations, as well as private funds, to spend on infrastructure, sports facilities, laboratories, research centers, salaries, training, and other necessities. Understandably, institutions with greater wealth are in a better position to offer superior learning conditions than resource-deprived institutions: just note the private institutions that have programs accredited by SINAES and the tuition fees they charge, or the resources that the Universidad de Costa Rica receives (53% of the FEES), in contrast to the Universidad Estatal a Distancia (10% of the FEES) (CONARE, 2008).

It is important to note that the availability of resources or institutional size are not guarantors of student learning and development (Kuh and Pascarella, 2004; Pascarella and Terenzini, 2005). Student development happens inside and outside of the classroom, in a holistic, not segmented, process. Learning is a function of what a student *does* in college, of the effort students devote to learning, and resources are only valuable to institutions if they encourage student engagement in learning opportunities in and out of the classroom. For instance, significant financial resources are required to hire full-time professors and student personnel to advance student learning beyond the classroom, build supportive and inclusive communities, involve students in active learning experiences, and help learners construct coherent values and ethical However, hiring full-time professors to spend their time in other frameworks. endeavors may not be contributing to institutional mission or learning outcomes. Discovering what actually transpires within institutions and whether students learning outcomes are actually achieved is beyond the scope of this dissertation, but it is clear that more research in this regard is fundamental if educational quality is to be attained.

If learning is most effective when classroom experiences are interconnected to institutional environments, faculty and student cultures, and out-of-class activities, students must make the time and effort to interact with faculty, staff, and other students about matters of consequence and establish high-quality relationships. Learners need to experience diversity in all of its expressions; get feedback, formally and informally; obtain support in meeting their non-academic responsibilities; and understand the relevance of what is being learned in applied contexts. In synthesis, they need time and effort to succeed academically in college.

Students of higher socio-economic status who do not have to work to pay for college or financially support other family members, have more time to engage in learning than students of lower socioeconomic status, and therefore are more likely to obtain superior learning outcomes. Underprivileged students, in contrast, have limited access to college, fewer opportunities to engage with faculty and other students, and academic difficulties. Most of these learners lack the knowledge, skills, self-confidence, and support networks to select a career path, navigate through the admissions process, access financial aid, and deal with the academic and social challenges of college. Even when awarded financial assistance, many are still obliged to work and care for their siblings or parents, so they miss out on valuable opportunities to engage in the campus culture, which is fundamental for persistence within the system. Attainment of lowincome students in higher education is less likely, due to low academic performance and high attrition rates (Gupton, 2009).

The results in this study indicate that more affluent schools recruit wealthier students, which may have an impact on student learning outcomes at these institutions. It appears that a second source of differentiation between institutions is the student population who attends them. However, no one can say for sure, as the only way to guarantee a representative sample in a research study of this nature would be to sample every institution and to know the size of the student population at each campus, a statistic that is not publicly available on institutions in the private sector. Nevertheless, the relative size of the two groups in the sample mirrors the proportions of public and private students in the total population of students.

With its methodological limitations, this study shows that more students of low socioeconomic status are enrolled at private universities, while students of higher socioeconomic status are enrolled at the more prestigious public institutions, namely the Universidad de Costa Rica and the Instituto Tecnológico de Costa Rica. As data suggest, there are more students at private universities whose parents have inferior educational levels, lower family incomes, a greater number of dependents, more work responsibilities, and more academic difficulties than students at public institutions. They also tend to be older, graduate from public high schools, often pay for college themselves instead of their parents, and take longer to enter college upon high school graduation. More low-income students are enrolled at private institutions, since many were unable to obtain the minimum scores on the entry examinations at public institutions in their programs of preference and others cannot afford delaying their time of graduation for years due to scheduling conflicts in the course offering at public universities with their work responsibilities.

#### Implications for Public Policy

This is the first study in Costa Rica to provide great descriptive detail about the private and public postsecondary sector in an information-deprived context. A honest attempt was been made to accurately depict the system, but as stated earlier, the information could be incomplete or inaccurate. Naturally, the validity of the data in this study should be contested by providing other equally-compelling information from legitimate data sources.

What is certain is that political leaders need more information about the higher education system to implement coordinated actions, so that cumulative benefits may be achieved. Costa Rica must expand access to higher education by increasing the rates of high school completion and college participation among recent high school graduates and adults, focusing on underrepresented groups like the economically disadvantaged, the Amerindian, the Chinese, and the disabled. Second, it should make sure that students at all levels experience rigorous curricula, oriented toward the development of valuable competencies, particularly in strategic areas like mathematics and the basic sciences. Third, it must increase student success in higher education, which translates into rates of degree participation and completion through undergraduate and graduate programs that respond effectively to the workforce development needs of employers. Fourth, it must seek to provide employment by stimulating an economy that employs its college graduates and encourages entrepreneurial ventures. Costa Rica must achieve all of these goals, as it also contains costs. Among the policy strategies that the government can employ, finance policy is the most effective. Costa Rica could use regulatory devices, governance structures, and accountability mechanisms to reinforce finance policy, but using regulations exclusively is insufficient, as policies can be bent and accountability requirements advantageously interpreted and implemented at institutional discretion. Finance policy is under control of the provider, not the recipient, and it can be flexible, since it can be reviewed periodically by the national legislature. Furthermore, finance policy is viewed more as an incentive than a coercive measure for reform.

While funding policies are effective public policy tools when used wisely, current policies are not being managed strategically. Public institutions enroll 31.11% of the total college population, but receive 100% of the public funds available for higher education (Table 17). These funds subsidize the education of every single student who enrolls at public institutions by charging low tuition fees, roughly estimated in this study at 8% of the real cost of their college education. However, an average of 51.44% of these students were wealthy enough to afford paying for tuition at private high schools. What is more, families with average monthly incomes who pay full tuition at public universities, spend only 2.82% of their annual family income (Table 8), and yet many students receive scholarships for high academic performance and for participating in student groups (Table 10). In contrast, 37.73% of the population at private institutions have family incomes in the lowest two socioeconomic quintiles, and yet they must pay for the entire cost of their education. What is worse, most high school graduates do not even enroll in higher education.

Some would argue that all students have an equal opportunity to apply for the enrollment slots at public institutions, which would be true if all students had received an equal academic preparation while in high school, or if public universities had enough slots to accommodate the entire demand for higher education. Others would encourage low-income students to apply for a college loan through CONAPE, but as statistics show, only 3.6% of the entire college population resorts to them, suggesting that these loans are not considered valuable alternatives for most students.

Ineffective finance policy is serious, particularly because potential budget deficits currently threaten funding in higher education. In a time of fiscal restraint, resources in higher education should be targeted to the neediest students, the underrepresented populations. Since every student obtains substantial gains from higher education (Dolton, Greenway & Vignoles, 1997), fairness dictates that students and their families pay part of the costs of their education (Euridyce, 1999). Wealthier students should pay more than socioeconomically disadvantaged students, as subsidies need to equalize entrance opportunities for people of different backgrounds (Barr, 1998). In return, these families could receive tax benefits to offset a portion of the tuition fees they pay. With these additional resources, public institutions could make more slots available in high demand programs for underprivileged students. Additionally, the State should award student aid vouchers to low-income students and other underrepresented populations at accredited programs in private universities, if enrollment slots at public institutions are unavailable, even if that means assigning the tributary payments made by private universities to that end.

Public resources must be used as a policy leverage to improve educational quality and efficiency. Performance-based funding needs to be awarded to higher education institutions, as this strategy has proven to be successful in many countries. For instance, South Africa uses performance set- asides, a percentage of funds beyond the basic funding formula which is distributed based on a series of performance measures. France, Finland, Denmark, and Austria use performance contracts, regulatory agreements, with punitive consequences for institutions that do not meet performance-based standards. Argentina, Bolivia, Chile, Bulgaria, Ghana, Hungary, Indonesia, Mozambique, and Sri Lanka employ competitive funds, resources that are awarded on a project-by-project basis, with the purpose of encouraging innovation and quality improvements. The right set of allocation instruments must be determined, according the particular circumstances of Costa Rica, once the policy objectives have been debated, defined, and prioritized through stakeholder consultations and expert studies (Salmi & Hauptman, 2006).

In sum, to achieve greater educational outcomes, policy-makers need to be persistent and systematic about implementing effective policy strategies. They must understand the consequences of establishing low prices of attendance at public institutions, need-based financial aid, merit-based financial aid, as well as the advantages and disadvantages of awarding loans. They should know that the problem with awarding appropriations as a percentage of the gross national product maintains the status quo, but does not achieve specific outcomes. They should also know that if appropriations are too generous, institutions might be inclined to adopt inefficient administrative practices. If they are too limited or focused on merit, they are disadvantageous to access of low-income students and detrimental to educational quality. A cost-effective strategy requires an understanding of the priorities and a careful alignment of appropriations, institutional support, tuition, and funding for student financial aid. Smart leadership implies the need for clarity and consensus with regards to the goals that need to be achieved; a clear long-term agenda put forth; and mechanisms of accountability that allow the public to be informed on metrics that signal the measure of progress. The creation of an institutional typology to manage the information on the system would be fundamental in this regard.

# APPENDICES

#### APPENDIX B: TELEPHONES AND PHYSICAL ADDRESSES OF UNIVERSITIES IN COSTA RICA

Physical Add	Telephone	University
200 Norte de la Iglesia de San P	2511-4000	UCR
Calle 9, Avenida 0 y 3 en Heredia. Sobre calle a	2277-3000	UNA
Carretera a Dulce Nombre de Car	2552-5354	TEC
200 Este de la farmacia La Paulina. Carretera a Saba	2527-2000	UNED
200 Este del Hipermás en San Seba	2226-3684	ESEPA
1.5 Km al norte de la Corte Suprema de Justicia. Ala	2436-3300	UNADECA
Centro Comercial San José 2000, tercer nivel. La U	2231-5855	FUNDEPOS
Frente al KFC en Los Yoses. San P	2207-7000	UAM
1 Km Norte del Servicentro La Galera. Cipreses de Currid	2272-9100	UACA
De la Iglesia Santa Teresita, 300 Este y 125 Sur. Barrio Escal	2283-7853	UNAM
De la iglesia Santa Feresita, 500 Este y 125 Sul. Barrio Esta Del Perimercado de Cedros, 375 Este. Montes de	2224-2791	UBILA
		UBC
De la Pizza Hut, 100 Norte y 50 Oeste. Paseo C	2222-6780	
600 Este, 200 Norte y 100 Este de la Iglesia Católica de Mo	2240-7272	U Católica
Detrás de la Iglesia Santa Teresita y frente a El Farolito. Barrio Escal	2212-0400	UC
Del Banco Nacional, 200 Sur, 500 Este y 400 Sur. San P	2280-5310	UCASIS
300 Este del Museo Nacional, Avenida 2da. Diagonal a Ir	2256-7944	UCCART
De la farmacia La Paulina, 50 Este, 50 Norte, 175 Este. Saba	2283-6880	U Creativa
Frente al nuevo Liceo de Hatillo. Al lado de Merecu	2214-6076	UCS
25 Sur de la esquina Suroeste del antiguo hospital de Ala	2440-2090	UCEM
El Colegio de Médicos, 100 Este y 150 Sur. Sabana	2290-1010	U La Salle
De la POPS en Sabana Sur, 400 Oeste, carretera a Es	2296-3944	UCIMED
250 Sur de la Corte Suprema de Justicia. Barrio Luján, San	2258-1968	UNICA
Del bar Tierra Colombiana, 150 Sur. San Francisco de Dos	2218-0747	USJ
Montes de Oca. San	2234-7290	UNIDIS
Edificio Centro Colón, oficina 2-8, segundo piso. Paseo C	2258-6290	UTUR
100 Este del KFC en Barrio La California. San	2280-8330	UVA
Del Colegio de Abogados, 200 Oeste, 100 Norte y 50 Oeste. Residencial Montealegre, casa	Información no	
Zapote (Estuvo en este lugar pero actualmente se desconoce su ubica	disponible	UNEM
75 Oeste del Registro Nacional. Za	2283-5533	UELD
100 Este y 25 Sur de la Clínica Bíblica. San	2221-7870	UNELA
De la Libraría Internacional, sobre el Boulevard de Rohrmoser, 200 N	2291-3932	USJT
Del Palí de Lourdes de Montes de Oca, 300	2253-0262	U Fidélitas
De los Tribunales de Justicia, 100 Sur. Car	2591-4563	UCA
Del ICE de Tibás, 600 Sur y 150 Oeste.Del PriceSmart 100 Oeste, 100 Norte y 100	2241-9090	UH
Del ICE de Tibás, 200 Sal y 100 October Hicebian 190 October, 100 Horte y 100 Del ICE de Tibás, 200 Este. La Florida de T	2297-2242	UNIBE
50 Este de la esquina Noreste del Cementerio de Desamparados. Del BAC San José, 50	2259-1038	UNICOR
Al frente de Paseo de las Flores. Her	2277-8000	UICR
	2258-0220	UIA
Avenida 7. Barrio Aranjuez, San 2 Kmc del Liece UNESCO, Parrie Margrén, San Leidre del Co		
3 Kms del Liceo UNESCO, Barrio Morazán. San Isidro del Ger	2771-6767	UISIL
De la Rotonda de Betania, 150 Este. Carretera a Saba	2225-9081	UNIN
De la esquina Noreste de la Iglesia de Curridabat, 50 N	2272-5901	UJPII
Del centro comercial Muñoz y Nanne, 300 Norte y 175	2224-1920	U Latina
150 Sur del periódico La República. Barrio Tou	2523-4000	ULACIT
Contiguo a la Embajada de Nicaragua. Barrio La Califo	2258-0033	ULICORI
De Torre del Este, 50 Oeste. Casa de 2 pisos, rejas bla	2234-0435	U Magíster
Del Banco Nacional, 200 Sur y 150 Oeste. San P	2281-2132	UNIMET
Del Hotel Balmoral, 100 Norte y 25 Oeste. San	2542-0300	UMCA
De la puerta principal del Museo Nacional, 100 Sur y 50 Oeste. San	2256-4448	UPA
De la Rotonda El Farolito, 200 Este y 150 Norte. Barrio Escal	2283-6464	UCI
(no dispor	Tel erróneo	USJC
100 Este del Parque Morazán. Avenida 3, Ca	2257-8715	USAM
100 Este del cine OMNI. Avenida 1, Calles 5 y 7, Edificio Ro	2257-4436	USL
50 Sur de la primera entrada a Lomas de Ayarco. Currid	2272-0006	USP
50 Este y 25 Norte de Librería Universal. Avenida Ce	2223-1124	UTC
1 Km Oeste de la Casa Presidencial. Za	2283-4747	U Veritas
2.5 Km Oeste de la Iglesia de Barrio San José. La Garita, Ala	2433-9908	INCAE
De la heladería POPS en Curridabat, 100 Sur y 50 C	2234-1011	ICAP
3 Kms del centro de Turrialba, sobre carretera a Siqu	2558-2000	CATIE
200 Sur y 50 Este de McDonalds de Plaza del Sol. Currid	2253-0082	FLACSO
De la línea del ferrocarril, 500 a la izquierda. Balsa de At	2455-1000	ECAG
Carretera a Limón. Del hotel Río Palma, 100 C	2713-0000	EARTH
De la Iglesia de Ciudad Colón, 400 Sur, 100 Este.Del abastecedor "Chepe Monge", 7 Km	2205-9000	UPEACE

## APPENDIX C: NAMES AND E-MAILS OF RECTORS OF UNIVERSITIES IN COSTA RICA

E-mai	Rector	University
rectoria@rectoria.ucr.ac.c	Dra. Yamileth González García	UCR
osegura@una.ac.o	Dr. Olman Segura Bonilla	UNA
infotec@itcr.ac.o	MSc. Eugenio Trejos Benavides	TEC
rarias@uned.ac.o	MBA Rodrigo Arias Camacho	UNED
rector@esepa.or	M.A. Mark C. Padgett Hobbs	ESEPA
rectoria@unadeca.ne	Dra. Herminia Perla Perla	UNADECA
lgarita@fundepos.ac.o	Dr. Luis Enrique Garita Bonilla	FUNDEPOS
lfallas@uam.ac.o	MSc. Luis Valverde Fallas	UAM
gmalavassi@uaca.ac.o	Dr. Guillermo Malavassi Vargas	UACA
vicerectoria@unam.ac.o	Lic. Jaime Barrantes Gamboa	UNAM
violeta@ubila.ne	MSc. Violeta Rocha Rocha	UBILA
carrillo@racsa.co.o	Dr. Juan Manuel Gómez Solera	UBC
rectoria@ucatolica.ac.o	Lic. Arnoldo Montero Martínez	U Católica
smata@universidadcentral.com	Lic. Sergio Mata Navarro	UC
msoto@ucasis.com	Licda. Maribel Soto Arguedas	UCASIS
info@uccart.com	MBA Leonardo Villegas Gómez	UCCART
info@ucreativa.com	Dr. Luis Montoya Salas	U Creativa
president@scu.ac.o	Lic. Justo Orozco Álvarez	UCS
czelaya@ucem.ac.	Dr. Chester J. Zelaya Goodman	UCEM
rectoria@ulasalle.ac.	Lic. Hno. Oscar Azmitia Barranco	U La Salle
guzmansp@ucimed.com	Dr. Pablo Guzmán Stein	UCIMED
maviles@udelascienciasyelarte.ac.	MSc. Francisco Jiménez Villalobos	UNICA
usanjose@hotmail.com	Dr. Manuel Alberto Sandí Murillo	USJ
info@unidis.ac.	Arq. Álvaro Rojas Quirós	UNIDIS
rectoria@utur.ac.	Lic. Ramón Madrigal León	UTUR
info@udelvalle.co	Lic. Miguel Alfaro Rodríguez	UVA
info@unem.edu	Lic. William Zamora González	UNEM
riguerrerop@uescuelalibre	Dr. Ricardo Guerrero Portilla	
		UELD
misionunela@gmail.com	Dr. Enrique Guang Tapia	UNELA
rectora@univerisdad sanjudas.ac.o	Dra. Helia Betancourt Plasencia	USJT
Direccionadministrativa @ufidelitas.ac.	MBA Gilberto Zeledón Agüero	U Fidélitas
rectoria@uca.ac.	Licda. Rosa Monge Monge	UCA
info@uhispanoamericana.ac.	Lic. Ángel Marín Espinoza	UH
info@unibe.ac.	Dr. Israel Hernández Morales	UNIBE
info@uindependiente.ac.	M.I. María Eugenia Vargas	UNICOR
hrodriguez@uinteramericana.ed	MBA Henry Rodríguez Serrano	UICR
mxrector@uia.ac.	Dr. Máximo Sequeira Alemán	UIA
rectoria@uisil.com	Dr. Miguel Acuña Valerio	UISIL
info@unin.ac.a	Gildo Francisco Alvarado	UNIN
pemilio@uipii.ac.o	Dr. Emilio Garreaud Indacochea	UJPII
Walter_bolanos_00@ ulatina.ac.	MBA Walter Bolaños Quesada	U Latina
scastro@ulacit.ac.	MSc. Silvia Castro Montero	ULACIT
info@ulicori.ac.	Dr. Carlos Paniagua Vargas	ULICORI
rectoria@umagister.com	MBA Vivian González Trejos	U Magíster
unimetcr@yahoo.e	Dr. Oscar Aguilar Mena	UNIMET
lhernandez@umca.ne	Dra. Ana Lucía Hernández Mainieri	UMCA
info@upanamericana.ne	Licda. Gina Brilla Ramírez	UPA
rectoria@uci.ac.	Dr. Edward Müller Castro	UCI
(información no disponible	Dr. Guillermo Eladio Quirós Álvarez	USJC
jbrizuela@usam.ac.	Lic. Joaquín Brizuela Rojas	USAM
Imeneses@costarricense.	MBA Ligia Meneses Sanabria	USL
rvalverde@uspsantapaula.com	Licda. Rocío Valverde Gallegos	USP
cccastroq@gmail.com	MBA Carlos Castro Quesada	UTC
jjseco@uveritas.ac.	Ing. José Joaquín Seco Aguilar	U Veritas
rectoría@incae.ed	Dr. Arturo Condo	INCAE
info@icap.ac.	Dr. Hugo Zelaya Calix	ICAP
dbarquer@catie.ac.	0 0	CATIE
-	Dr. José Joaquín Campos Arce	
jmora@flacso.or.o	Dr. Jorge Mora Alfaro Dr. Francisco Romano Roya	FLACSO
info@ecag.ac.o	Dr. Francisco Romero Royo	ECAG
jzaglul@earth.ac.o	Dr. José Antonio Zaglul Slon	EARTH
jmaresca@upeace.or	Dr. John J. Maresca	UPEACE

### **Appendix D: Survey in English**

# THE STUDENTS OF UNDERGRADUATE HIGHER EDUCATION IN COSTA RICA

GOOD MORNING/AFTERNOON/EVENING. My name is \_\_\_\_\_\_ and I am conducting a research project with the University of Pennsylvania. We are carrying out a national survey to determine the academic preparation, socioeconomic status, motives for college choice, and demographic information of the students of higher education. I will ask you a series of questions which should take approximately fifteen minutes to answer. If you agree to participate in the study, you will be contributing to research for decision-making purposes, which could eventually benefit students in higher education.

Your participation is voluntary. The information you give me will be handled confidentially and your name will not be asked. You may also withdraw from the study at any moment just by letting me know when you are done answering the questions. In the future, you will not be able to change your mind about submitting your responses, as I will have no way of looking up your information. Now that the purpose and conditions of the research study have been discussed with you, do you agree to participate? If you have any questions or comments, please contact Silvia Castro at scastrom@racsa.co.cr.

## Prescreening questions

- 1. Are you 18 years old or older?
  - **Yes**
  - □ No (say thank you and finish off)
- 2. Are you currently enrolled at a university?
  - □ Yes
  - □ No (say thank you and finish off)
- 3. At which level?
  - □ Baccalaureate
  - □ Licentiature
  - □ Other (say thank you and finish off)
- 4. At which institution are you currently enrolled? (if the university is not on the list, say thank you and finish off)
  - UCR Ciudad Universitaria Rodrigo Facio (Public comprehensive urban campus)
  - □ UNA Sede Liberia (Public comprehensive rural campus)
  - □ UNED Sede Palmares (Public distance education)
  - □ ITCR-Tecnológico Sede de Cartago (Public specialized in technology)

- Universidad Interamericana Heredia (Large private comprehensive urban campus)
- □ Universidad Latina Limón (Large private comprehensive rural campus)
- □ Universidad Hispanoamericana Sede Llorente de Tibás (Medium private comprehensive urban campus)
- Universidad Internacional San Isidro Labrador Pérez Zeledón (Medium private comprehensive rural campus)
- □ USAM San José (Small private comprehensive urban campus)
- □ Universidad de las Ciencias y el Arte Esparza (Small private comprehensive rural campus)
- **UCIMED** (private specialized in medicine)
- □ Veritas (private specialized in design)
- □ Universidad Libre de Derecho (private specialized in law)
- □ Católica (private denominational)
- □ Santa Paula (private specialized in therapy)

## I. Academic preparation

- 5. In which academic field are you majoring?
  - □ Arts, letters, and philosophy (e.g. Dance, Music, Graphic Design, English, Philology, Linguistics, Literature)
  - Basic sciences (e.g. Biology, Physics, Geology, Chemistry, Meteorology, Mathematics)
  - Social and economic sciences (e.g. Law, History, Sociology, Anthropology, Accounting, Public Administration, Business, Psychology, Advertising, Journalism)
  - □ Education (e.g. Pre-school, Primary, Secondary, Special, Library Sciences, Teaching English as a Foreign Language)
  - □ Natural Resources (e.g. Agricultural Engineering, Food Sciences ,Geography, Tourism)
  - Engineering (e.g. Information Systems, Chemical, Civil, Electronic, Electric, Mechanical, Architecture, Urban Design, Telecommunications)
  - □ Health (e.g. Medicine, Nutrition, Physical Therapy, Environmental Health, Microbiology, Dentistry, Nursing, Pharmaceutics)
  - Don't know/Other: \_\_\_\_\_-

- 6. What is your highest academic degree?
  - □ High school diploma
  - Technical
  - □ Professoriate
  - □ Associate
  - □ Bachelor
  - □ Licenciatura
  - □ Professional specialization
  - □ Master
  - Doctorate
- 7. What is your mother's highest academic degree?
  - Concluded Primary
  - □ High school diploma
  - □ Technical
  - □ Professoriate
  - □ Associate
  - □ Bachelor
  - □ Licentiature
  - □ Professional specialization
  - Master
  - Doctorate
  - □ Does not have mother/does not know
- 8. What is your father's highest academic degree?
  - □ Concluded Primary
  - □ High school diploma
  - Technical
  - □ Professoriate
  - □ Associate
  - Bachelor
  - □ Licentiature
  - Professional specialization
  - Master
  - Doctorate
  - □ Does not have father/does not know

- 9. What is your siblings' highest academic degree?
  - □ Concluded Primary
  - □ High school diploma
  - Technical
  - □ Professoriate
  - □ Associate
  - □ Bachelor
  - □ Licentiature
  - □ Professional specialization
  - □ Master
  - Doctorate
  - $\hfill\square$  Does not have father/does not know
- 10. Where did you obtain your high school diploma?
  - □ High school in Costa Rica
  - □ High school abroad
  - □ By taking the General Education Development test (skip question 11)
- 11. What type of high school is it?
- a. Check only one.
  - Day school
  - □ Night school
- b. Check only one.
  - D Public
  - □ Private
  - □ Private subsidized
- c. Check only one.
  - □ Academic
  - □ Technical
  - Other \_\_\_\_
- 12. What grades did you typically earn in high school?
  - □ From 95% upwards
  - □ Between 85% and 94%
  - □ Between 75% and 84%
  - □ Between 65% and 74%

- 13. How well did you perform academically in high school, in comparison to your classmates?
  - □ Well above average
  - □ Above average
  - □ Average
  - □ Below average
  - □ Well below average
- 14. In general, how easy or difficult was it for students to obtain good grades in your high school?
  - Very Easy
  - Easy
  - □ Average
  - □ Difficult
  - □ Very Difficult

15. Did you ever fail a year in high school?

- Yes.
- $\Box$  No
- Won't answer/can't remember
- 16. How many years did it take you to first enter college once you graduated from high school?
  - □ Less than one (skip 17)
  - One
  - □ Two
  - □ Three
  - □ Four
  - Other: \_\_\_\_\_
- 17. Why did you wait to go to college after graduating from high school? Mark all that apply.
  - □ Needed to work to save money
  - □ Wanted to gain work experience
  - □ Went to do missionary work or social service
  - □ Needed to take a break away from school
  - □ Other: \_\_\_\_\_

## 18. What grades do you typically earn in college?

- □ From 95% upwards
- □ Between 85% and 94%
- □ Between 75% and 84%
- □ Between 65% and 74%

## 19. Have you failed any courses in college?

- **Yes**
- □ No

## 20. Please rate your current ability to speak English.

- □ Excellent
- □ Very good
- □ Average
- 🗆 Fair
- Poor

## 21. How many courses do you typically enroll in a particular term?

- One
- Two
- □ Three
- □ Four
- □ Five
- □ More than five

## 22. How many terms do you enroll per year?

- □ One semester
- □ Two semesters
- One quarter
- □ Two quarters
- □ Three quarters
- Other: \_\_\_\_\_

## Motives for college choice

## 23. Are you enrolled in a program of your choice?

- □ Yes (skip 24)

24. Why are you not enrolled in the program of your choice? Check only one.

- □ I wasn't admitted into the program of choice.
- □ The program of choice is not available at the university in which I wanted to enroll.
- □ My family had other expectations for me.
- □ It was too expensive.
- □ Other: \_\_\_\_\_
- 25. Have you ever been enrolled at other universities before enrolling in the current one?
  - □ Yes
  - □ No (skip question 26 and 27)
- 26. In how many?
  - One
  - Two
  - □ More than two
- 27. In which institutions were you enrolled before enrolling in the current one? Mark all that apply.

  - □ UCR
  - □ Universidad Nacional
  - □ ITCR Tecnológico
  - □ Universidad Latina
  - □ INA (Instituto Nacional de Aprendizaje)
  - □ At a university abroad
  - □ Other \_\_\_\_\_

28. Why did you leave those institutions? Check all the answers that apply.

- **Course schedules conflicted with work**
- □ Long duration of program
- □ Family commitments
- □ High cost of education
- □ Finished the program in which he or she was enrolled
- □ Distance from home or work
- □ Poor quality of teachers or program
- □ Decided to enroll in another program that wasn't available at the school
- □ Other \_\_\_\_\_

- 29. What are the reasons why you chose your current institution? Check all the answers that apply.
  - □ Institutional prestige/reputation
  - Cost
  - □ Availability of program
  - □ Infrastructure
  - □ Proximity to home or work
  - □ Quality of faculty
  - □ Quality of curriculum
  - □ Availability of scholarships
  - □ Recommended by others
  - □ Flexibility of class schedules
  - □ Accepted transfer credits
  - □ Payment plan options
  - □ Technology
  - □ Program accredited by SINAES
  - □ My friends go there
  - **English is taught in the curriculum**
  - Other: \_\_\_\_\_
- 30. Indicate your overall level of satisfaction with your institution: 1 is lowest level of satisfaction, and 10 is the highest level of satisfaction.
  - 1

     2

     3

     4

     5

     6

     7

     8

     9

     10
- 31. How do you value the relationship between price and quality at your institution?
  - □ More quality is offered for the money that you pay
  - □ The expected quality is offered for the money that you pay
  - Less quality is offered for the money that you pay
- 32. Which other institutions did you consider before enrolling at your current institution?

### **D. Demographic characteristics**

33. When at school, do you live away from home?

□ Yes

- $\square$  No
- 34. Age in years \_\_\_\_\_
- 35. Gender
  - □ Female
  - □ Male

## 36. Ethnic group

- □ White
- □ Mestizo ( "trigueño" or "moreno")
- □ Black or mulatto
- □ Amerindian ("indigenous")
- □ Chinese
- □ Other \_\_\_\_\_

## 37. Nationality

- Costa Rican
- □ Nicaraguan
- □ Colombian
- □ Chinese
- □ Other \_\_\_\_\_

## 38. Marital status

- □ Single
- □ Married
- □ Civil partner
- □ Separated
- Divorced
- □ Widowed

## **39.** Number of children

- □ **0**
- □ 1
- □ 2
- □ More than 2

## 40. Do you have any disabilities or special learning needs?

- □ Yes
- □ No (skip 45)

41. Specify your disability or special learning needs:

### Socioeconomic and work status

- 42. Do you work while you study?
  - □ Yes
  - □ No (skip 43, 44, and 45)

43. How many hours a week do you work? \_\_\_\_\_

- 44. Indicate your monthly income:
  - □ Less than 100,000 colones
  - □ Between 101,000 and 200,000 colones
  - □ Between 201,000 and 300,0000 colones
  - □ Between 301,000 and 400,000 colones
  - □ Between 401,000 and 500,000 colones
  - □ Between 501,000 and 600,000 colones
  - □ Over 600,000 colones: please specify \_\_\_\_\_

45. How many people depend on your income?

- □ Nobody
- □ One
- **Two**
- □ Three
- □ More than three

#### 46. How many people in your household perform remunerated work?

- □ None
- □ One
- □ Two
- □ Three
- □ Four
- □ Five
- □ Six
- □ More than six

47. Indicate your family's total monthly income:

- □ Less than 100,000 colones
- □ Between 101,000 and 200,000 colones
- □ Between 201,000 and 300,0000 colones
- □ Between 301,000 and 400,000 colones
- □ Between 401,000 and 500,000 colones
- □ Between 501,000 and 600,000 colones
- □ Over 600,000 colones: please specify \_\_\_\_
- 48. Who is the main provider of income in your household?
  - □ Father
  - □ Mother
  - □ Both parents
  - □ Yourself
  - □ Your spouse or partner
  - □ Both yourself and your spouse or partner
- 49. Who is the primary source of funding for your college studies? Select one answer.
  - □ Yourself
  - □ Parents
  - □ Spouse or partner
  - □ Institutional scholarship
  - □ CONAPE loan (skip 50)
  - Other: \_\_\_\_\_
- 50. Why is the CONAPE loan not your primary source of funding for your college studies?
  - Didn't need it
  - □ Hadn't heard of it
  - □ I found other loans that were more attractive
  - □ Didn't know about the requirements and procedures to obtain it
  - □ Did not want to get into debt
  - □ Too many bureaucratic procedures to request it
  - □ Did not have a guarantor or guaranty
  - Other \_\_\_\_\_

#### APPENDIX E: SURVEY IN SPANISH

# LOS ESTUDIANTES DE EDUCACIÓN SUPERIOR DE GRADO EN COSTA RICA

BUENOS DÍAS/TARDES/NOCHES. Mi nombre es \_\_\_\_\_\_ y realizo un trabajo de investigación con la Universidad de Pennsylvania. Estamos realizando una encuesta nacional para determinar la formación académica, el estatus socio-económico, los motivos para la selección de Universidad, y la información demográfica de los estudiantes de educación superior. Le formularé una serie de preguntas que tomarán aproximadamente quince minutos para completar. Si usted está de acuerdo en participar en el estudio, estará contribuyendo a la investigación con propósitos de toma de decisiones que podrían eventualmente beneficiar a los estudiantes de educación superior.

Su participación es voluntaria. La información que usted me dará será utilizada de manera confidencial y su nombre no quedará asociado a sus respuestas. Usted también se puede retirar del estudio en cualquier momento con sólo dejármelo saber. En el futuro, usted no podrá cambiar de opinión sobre entregar sus respuestas, debido a que no tendré forma de ubicar su información. Ahora que hemos discutido el propósito y las condiciones del estudio de investigación con usted, ¿está de acuerdo en participar?

- 1. ¿Tiene más de 18 años?
- 🗆 Sí
- □ No (dé las gracias y concluya)
- 2. ¿Está actualmente matriculado(a) en alguna universidad?
  - 🗆 Sí
  - No (dé las gracias y concluya)
- 3. ¿En qué nivel?
  - □ Bachillerato
  - □ Licenciatura
  - □ Otro (dé las gracias y concluya)
- 4. ¿En cuál institución está actualmente matriculado(a)? (si la Universidad no se encuentra en la lista, dé las gracias y concluya)
  - UCR Ciudad Universitaria Rodrigo Facio (Campus urbano público comprensivo)
  - □ UNA Sede Liberia (Campus rural público comprensivo)
  - **UNED Sede Palmares (Educación pública a distancia)**
  - □ ITCR-Tecnológico Sede de Cartago (Educación pública especializada en tecnología)

- □ Universidad Interamericana Heredia (Campus urbano privado grande)
- □ Universidad Latina Limón (Campus rural comprensivo privado grande )
- Universidad Hispanoamericana Sede Llorente de Tibás (Campus urbano privado comprensivo mediano)
- Universidad Internacional San Isidro Labrador Pérez Zeledón (Campus rural privado comprensivo mediano)
- □ USAM San José (Campus urbano privado comprensivo pequeño)
- □ Universidad de las Ciencias y el Arte en Costa Rica Esparza (UNICA) (Campus rural privado comprensivo pequeño)
- **UCIMED** (Campus privado especializado en medicina)
- □ Veritas (Campus privado especializado en diseño)
- □ Universidad Libre de Derecho (Campus privado especializado en derecho)
- **Católica (Campus privado denominacional)**
- □ Santa Paula (Campus privado especializado en terapia)

# I. Preparación académica

- 5. ¿En cuál campo académico se encuentra la carrera de su elección?
  - Artes, letras, y filosofía (ej. Danza, Música, Diseño Gráfico, Inglés, Filología, Lingüística, Literatura)
  - Ciencias Básicas (ej. Biología, Física, Geología, Química, Meteorología, Matemáticas)
  - Ciencias Sociales y Económicas (ej. Derecho, Historia, Sociología, Antropología, Contaduría, Administración Pública, Negocios, Psicología, Publicidad, Periodismo)
  - Educación (ej. Pre-escolar, Primaria, Secundaria, Especial, Ciencias Bibliotecarias, Enseñanza del Inglés como Lengua Extranjera)
  - Recursos Naturales (ej. Agronomía, Ciencias Alimenticias, Geografía, Turismo)
  - Ingeniería (ej. Sistemas Informáticos, Química, Civil, Electrónica, Eléctrica, Mecánica, Arquitectura, Diseño Urbano, Telecomunicaciones)
  - Salud (ej. Medicina, Nutrición, Terapia Física, Salud Ambiental, Microbiología, Odontología, Enfermería, Farmacia)
  - □ No sé/Otro: \_\_\_\_\_-
- 6. ¿Cuál es su grado académico más alto?
  - □ Bachillerato de secundaria
  - Técnico
  - □ Profesorado
  - Diplomado
  - □ Bachillerato universitario
  - □ Licenciatura
  - □ Especialidad profesional
  - Maestría
  - Doctorado

- 7. ¿Cuál es el grado académico más alto de su madre?
  - □ Concluyó la primaria
  - □ Bachillerato de secundaria
  - Técnico
  - □ Profesorado
  - Diplomado
  - □ Bachillerato universitario
  - □ Licenciatura
  - □ Especialidad profesional
  - Maestría
  - Doctorado
  - $\Box$  No tiene madre/no sabe
- 8. ¿Cuál es el grado académico más alto de su padre?
  - □ Concluyó la primaria
  - □ Bachillerato de secundaria
  - Técnico
  - □ Profesorado
  - Diplomado
  - □ Bachillerato universitario
  - Licenciatura
  - Especialidad profesional
  - Maestría
  - Doctorado
  - □ No tiene padre/no sabe
- 9. ¿Cuál es el grado académico más alto de sus hermanos?
  - □ Concluyó la primaria
  - □ Bachillerato de secundaria
  - Técnico
  - □ Profesorado
  - Diplomado
  - □ Bachillerato universitario
  - □ Licenciatura
  - □ Especialidad profesional
  - Maestría
  - Doctorado
  - □ No tiene hermanos/no sabe
- 10. ¿Adónde obtuvo su título de bachillerato de secundaria?
  - □ Colegio en Costa Rica
  - □ Secundaria en el extranjero
  - □ Bachillerato por Madurez (omita la pregunta 11)

- 11. ¿Qué tipo de colegio es?
- d. Marque solo uno.
  - Colegio diurno
  - Colegio nocturno
- e. Marque solo uno.
  - Público
  - Privado
  - □ Privado subvencionado
- f. Marque solo uno.
  - □ Académico
  - □ Técnico
  - □ Otro \_\_\_\_\_
- 12. ¿Qué notas obtenía usted generalmente en el colegio?
  - □ De 95% para arriba
  - □ Entre 85% y 94%
  - □ Entre 75% y 84%
  - □ Entre 65% y 74%
- 13. ¿Qué tan bien se desempeñó usted académicamente en el colegio, en comparación con sus compañeros de clase?
  - □ Bastante por encima del promedio
  - □ Encima del promedio
  - Promedio
  - □ Por debajo del promedio
  - □ Muy por debajo del promedio
- 14. En general, ¿qué tan fácil o difícil era para los estudiantes obtener buenas notas en su colegio?
  - □ Muy fácil
  - Fácil
  - □ Regular
  - Difícil
  - □ Muy difícil

15. ¿Reprobó algún año en el colegio?

- 🗆 Sí
- $\square$  No
- □ No contesta/no recuerda

16. ¿Cuántos años le tomó entrar a la Universidad una vez que se graduó del colegio?

- □ Menos de uno (omita la pregunta 17)
- 🗆 Uno
- Dos
- **Tres**
- Cuatro
- □ Otro: \_\_\_\_\_
- 17. ¿Por qué esperó para entrar a la Universidad después de graduarse del colegio? Marque todos los que apliquen.
  - **Tenía que trabajar para ahorrar dinero**
  - □ Quería obtener experiencia laboral
  - □ Hice trabajo misionero o social
  - □ Tenía que descansar del estudio
  - Otro: \_\_\_\_\_

18. ¿Cuáles notas ha obtenido generalmente en la universidad?

- □ De 95% para arriba
- □ Entre 85% y 94%
- □ Entre 75% y 84%
- □ Entre 65% y 74%

19. ¿Ha reprobado algún curso en la universidad?

- 🗆 Sí
- No
- 20. Por favor, indique su habilidad actual para hablar inglés.
  - □ Excelente
  - □ Muy buena
  - □ Regular
  - □ Un poco
  - □ Muy poco

21. ¿Cuántos cursos matricula normalmente en un período lectivo?

- 🗆 Uno
- Dos
- □ Tres
- □ Cuatro
- □ Más de cinco

22. ¿Cuántos períodos lectivos matricula usted por año?

- □ Un semestre
- Dos semestres
- □ Un cuatrimestre
- Dos cuatrimestres
- □ Tres cuatrimestres
- □ Otro: \_\_\_\_\_

# Motivos para la selección de universidad

- 23. ¿Está usted matriculado(a) en un programa de su elección?
  - □ Sí (omita la pregunta 24)
  - $\square$  No
- 24. ¿Por qué no está usted matriculado(a) en el programa de su elección? Marque solo una respuesta.
  - □ No fui admitido(a) en el programa elegido.
  - □ El programa elegido no está disponible en la Universidad en la que me quería matricular.
  - □ Mi familia tenía otras expectativas para mí.
  - □ Era muy caro.
  - □ Otro: \_\_\_\_\_
- 25. ¿Ha estado usted matriculado(a) en otras universidades antes de matricularse en la actual?
  - Sí
  - □ No (omita las preguntas 26 y 27)

### 26. ¿En cuántas?

- 🗆 Una
- Dos
- □ Más de dos

- 27. ¿En cuáles instituciones estuvo usted matriculado(a) antes de matricularse en la actual? Marque todas las que apliquen.

  - □ UCR
  - □ Universidad Nacional
  - □ ITCR Tecnológico
  - Universidad Latina
  - □ INA (Instituto Nacional de Aprendizaje)
  - □ En una Universidad en el extranjero
  - □ Otra \_\_\_\_\_

28. ¿Por qué dejó esas instituciones? Marque todas las respuestas que apliquen.

- □ Los horarios de los cursos chocaban con el trabajo
- □ Larga duración del programa
- □ Compromisos familiares
- □ Alto costo de la educación
- □ Terminó el programa en el que estaba matriculado(a)
- Distancia de la casa o del trabajo
- □ Mala calidad de los profesores o el programa
- Decidió matricularse en otro programa que no estaba disponible en su universidad
- □ Otro \_\_\_\_\_
- 29. ¿Cuáles fueron las razones por las que escogió su actual institución? Marque todas las respuestas que apliquen.
  - □ Prestigio institucional/reputación
  - Costo
  - Disponibilidad del programa
  - □ Infraestructura
  - □ Proximidad de la casa o el trabajo
  - □ Calidad de los profesores
  - □ Calidad de los contenidos de los cursos
  - □ Disponibilidad de becas
  - □ Recomendada por otros
  - □ Flexibilidad de horarios de clase
  - □ Aceptaron convalidaciones o equiparaciones
  - □ Opciones de plan de pagos
  - Tecnología
  - □ Programa acreditado por SINAES
  - Mis amigos estudian ahí
  - □ Se enseña inglés dentro del currículo
  - Otro: \_\_\_\_\_

- 30. Indique su nivel de satisfacción general con su institución: 1 es el nivel más bajo de satisfacción y 10 el nivel más alto de satisfacción.
  - 1
    2
    3
    4
    5
    6
    7
    8
    9
    10
- 31. ¿Cómo valora usted la relación entre precio y calidad en su institución?
  - □ Se ofrece más calidad por el dinero que usted paga
  - □ Se ofrece la calidad esperada por el dinero que usted paga
  - □ Se ofrece menos calidad por el dinero que usted paga
  - 32. ¿Cuáles otras instituciones tomó usted en consideración antes de matricularse en su institución actual?

# D. Características demográficas

- 33. ¿En época lectiva, vive usted lejos de casa?
- 🗆 Sí
- $\square$  No
- 34. Edad en años \_\_\_\_\_
- 35. Sexo
  - □ Femenino
  - □ Masculino

# 36. Grupo étnico

- □ Blanco
- □ Mestizo ( "trigueño" o "moreno")
- □ Negro o mulato
- Indígena
- □ Otro \_\_\_\_\_

### 37. Nacionalidad

- □ Costarricense
- □ Nicaragüense
- □ Colombiano(a)
- □ Chino(a)
- Otra \_\_\_\_\_\_

### 38. Estado civil

- □ Soltero(a)
- □ Casado(a)
- □ Pareja en unión libre
- □ Separado(a)
- Divorciado(a)
- □ Viudo(a)

#### 39. Número de hijos

- □ **0**
- □ 1
- 2
- □ Más de 2

# 40. ¿Tiene usted alguna discapacidad o necesidad de aprendizaje especial?

- 🗆 Sí
- □ No (omita la pregunta 41)
- 41. Especifique su discapacidad o necesidades especiales de aprendizaje:

### Estatus socio-económico y laboral

- 42. ¿Trabaja usted mientras estudia?
  - 🗆 Sí
  - □ No (omita las preguntas 43, 44, y 45)
- 43. ¿Cuántas horas por semana trabaja usted? \_\_\_\_\_
- 44. Indique su salario mensual:
  - □ Menos de 100.000 colones
  - □ Entre 101.000 y 200.000 colones
  - □ Entre 201.000 y 300.0000 colones
  - □ Entre 301.000 y 400.000 colones
  - □ Entre 401.000 y 500.000 colones
  - □ Entre 501.000 y 600.000 colones
  - Más de 600.000 colones: especifique por favor \_\_\_\_\_\_

45. ¿Cuántas personas dependen de sus ingresos?

- □ Nadie
- 🗆 Una
- Dos
- □ Tres
- □ Más de tres

# 46. ¿Cuántas personas trabajan por un salario en su hogar?

- 🗆 Una
- Dos
- □ Tres
- □ Cuatro
- □ Seis
- □ Más de seis

# 47. Indique el ingreso mensual total de su familia:

- □ Menos de 100.000 colones
- □ Entre 101.000 y 200.000 colones
- □ Entre 201.000 y 300.0000 colones
- □ Entre 301.000 y 400.000 colones
- □ Entre 401.000 y 500.000 colones
- □ Entre 501.000 y 600.000 colones
- □ Más de 600.000 colones: especifique por favor \_\_\_\_\_
- 48. ¿Quién es el proveedor principal de ingresos en su hogar?
  - □ Padre
  - □ Madre
  - □ Ambos padres
  - □ Usted
  - □ Su cónyuge o pareja
  - Tanto usted como su cónyuge o pareja

- 49. ¿Quién es la fuente principal de recursos para sus estudios universitarios? Seleccione una respuesta.
  - □ Usted
  - □ Sus padres
  - □ Cónyuge o pareja
  - Beca institucional
  - □ Préstamo de CONAPE (omita la pregunta 50)
  - □ Otro: \_\_\_\_\_
- 50. ¿Por qué no es el préstamo de CONAPE su principal fuente de financiamiento para sus estudios universitarios?
  - □ No lo necesito
  - No sabía de él
  - □ Encontré otros préstamos más atractivos
  - □ No conocía los requisitos y trámites para obtenerlo
  - □ No quería endeudarme
  - □ Muchos trámites burocráticos para solicitarlo
  - □ No tenía un fiador ni una garantía
  - □ Otro \_\_\_\_\_

#### BIBLIOGRAPHY

Acta de la Sesión No. 29-09 del Consejo Nacional de Rectores (2009).

- Barr, N. (1998). The economics of the welfare state (3rd ed). Oxford: Oxford University Press.
- Black, D., & Smith, J. (2004). How robust is the evidence on the effects of college quality? Evidence from matching. *Journal of Econometrics* (July/August), 99-124.
- Brenes, I. (2005). Deserción y repitencia en la educación superior universitaria de Costa Rica.
- Brenes, I. (2003). Los géneros en la educación superior universitaria en Costa Rica 2003.
- Cabrera J.M. (2008). Posibilidades de estudio en la educación superior estatal de Costa Rica en el 2008.
- Calderón, A. L. (2005). Diagnóstico sobre las políticas de las universidades públicas y privadas de Costa Rica en materia de investigación.
- Card, D. (1999). The causal effect of education on earnings. *Handbook of Labor Economics, 3A.* Holland: Elsevier.
- Castillo, S. (March 12, 2007). Decano del CUNA insiste en crear Universidad Técnica en Alajuela. *Periódico El Financiero*.
- Castro, S. (2004). *Workplace skills assessment of the Costa Rican labor market.* Costa Rica: Universidad Latinoamericana de Ciencia y Tecnología.
- Chaffee, E. E. (1984). Successful strategic management in small private colleges. *The Journal of Higher Education*, 55(2), 212-241.
- Centro Interuniversitario de Desarrollo (2007). Educación superior en Iberoamérica: Informe 2007.
- CINDE. (2009). Costa Rica: The place. The people. The opportunities., from http://www.cinde.org/
- Conejo, C. (2004). Financiamiento de la educación en América Latina: El caso de Costa Rica.
- Consejo Nacional de Competividad (2007). *Educación superior y competitividad en Costa Rica.* Costa Rica: Ministerio de Economía, Industria y Comercio.
- Comisión Nacional de Préstamos para la Educación (2008). Memoria Anual 2008.
- Consejo Nacional de Rectores (2004). Convenio sobre la Nomenclatura de Grados y Títulos de la Educación Superior Universitaria Estatal.
- Consejo Nacional de Rectores (2008). *Estado de la Educación 2*: Consejo Nacional de Rectores.

- **Consejo Superior de Educación (2008).** *Instituciones parauniversitarias, carreras aprobadas y modificaciones presentadas ante el Consejo Superior de Educación.*
- Cox A. (2005). Estudio de empleadores: de los profesores de educación secundaria de ciencias, español, de estudios sociales, inglés, matemática en Costa Rica. 2004. Costa Rica: Consejo Nacional de Rectores.
- Cox, A. (2008). Estudio de empleadores de los profesionales en agronomía en Costa Rica. 2006-2007. Informe final. Costa Rica: Consejo Nacional de Rectores.
- Cox, A. & Fallas, J. (2003). Estudio de empleadores de profesionales en la administración en Costsa Rica. 2002. Informe final. Costa Rica: Consejo Nacional de Rectores.
- Cox, A. & Fallas, J. (2004). Estudio de empleadores de graduados de informática en Costa Rica. 2003. Informe final. Costa Rica: Consejo Nacional de Rectores.
- Cunningham, A., & Santiago, D. (2008). *Student Aversion to Borrowing: Who borrows and who doesn't.*
- Dolton, P.J., Greenaway, D., & Vignoles, A. (1997). Whither higher education? An economic perspective for the Dearing Committee of Inquiry. The *Economic Journal*, 107, 710-726.
- Donoso, S., & Schiefelbein, E. (2004). Family education and access to Latin American higher education. *International Higher Education.*, (Summer). Retrieved from http://www.bc.edu/bc\_org/avp/soe/cihe/newsletter/News36/text013.htm.
- Ehrenberg, R. (2004). Econometric Studies of Higher Education. *Journal of Econometrics* (July/August), 19-37.
- Estrada, M. R. & Luna, J.G. (2004). Internacionalización de la educación superior: Nuevos proveedores externos en Centro América. Guatemala: Digital Observatory for Higher Education in Latin America and the Caribbean.
- Eurydice (1999). Key topics in education. Volume I: Financial support for students in higher education in Europe. Trends and debates. Brussels: European Commission.
- Flores, E. (2009). Siempre en busca de la excelencia. La Nación.
- Gupton, J. Castelo-Rodríguez, C., Martinez, D.A. & Quintanar, I. (2009). Creating a pipeline to engage low-income, first-generation college students. In Harper, J. & Quaye, S. J. (Eds.) *Student engagement in higher education*. New York: Routledge.
- Institute of Higher Education Policy (1998). *Reaping the benefits: Defining the public and private value of going to college.*
- Instituto Nacional de Estadística y Censos (2005). Encuesta de ingresos y gastos de hogares 2005.
- Instituto Nacional de Estadística y Censos (2008). Encuesta de hogares de propósitos múltiples. Costa Rica.

- Kirp, D. (2003). *Shakespeare, Einstein, and the bottom line: The marketing of higher education*. Cambridge: Harvard University Press.
- Knight, J. (2005). An internationalization model: Responding to the new realities and challenges. In H. De Wit, Jaramillo, I.C., Gacel-Avila, J. and Knight, J. (Ed.), *Higher education in Latin America: The international dimension*. Washington, D.C.: The World Bank.
- Kuh, G.D. & Pascarella, E.T. (2004) What does institutional selectivity tell us about educational quality? *Change*, *36* (5), 52-58.
- Litten, L. (1980). Marketing higher education. Journal of Higher Education, 51, 40-59.
- Mata, F., & Jofré, A. (2001). Estudio de la oferta y la demanda del recurso humano del sector TICs. Costa Rica: Prosoftware.
- McCormick, A. C., & Zhao, C.-M. (2005). Rethinking and reframing the Carnegie Classification (Cover story). [Article]. *Change*, *37* (5), 50-57.
- Ministerio de Ciencia y Tecnología. (2008). Indicadores nacionales 2008 Ciencia, Tecnología e Innovación.
- Minero-Torres, E. Una breve historia del Sistema Nacional de Colegios Científicos. Retrieved from http://www.educa.org.do/2005/programas/Aprendo2006/Una%20breve%20histo ria%20del%20Sistema%20Nacional%20de%20Colegios%20Cient%C3%ADficos.doc
- Monks, J. (2000). The returns to individual and college characteristics: evidence from the national longitudinal survey of youth. *Economics of Education Review*(June), 279-289.
- Mora, J. (2006). La educación superior no universitaria en Costa Rica.
- Morphew, C. C. (2009). Conceptualizing change in the institutional diversity of U.S. colleges and universities. [Article]. *Journal of Higher Education*, *80*(3), 243-269.
- Murillo, F. J. (2007). Paper commissioned for the EFA Global Monitoring Report 2008, Education for All by 2015: Will we make it?
- The National Center for Public Policy and Higher Education. (2008). *Technical Guide for Measuring Up 2006: Documenting Methodology, Indicators, and Data Resources.*
- Organization for Economic Co-Operation and Development. (2009). Education at a *Glance*, 2008.
- Oficina de Planificación y Educación Superior. (2004a). Estudio de empleadores de los graduados de informática en Costa Rica. 2003. Informe final.
- Oficina de Planificación y Educación Superior. (2004b). La vida estudiantil en las instituciones de educación superior universitaria estatal de Costa Rica.
- Oficina de Planificación y Educación Superior. (2005). Aspectos relacionados con el rendimiento académico de los estudiantes que ingresaron a las instituciones de educación universitaria estatal en 1990 y 1996.

- Oficina Regional de Educación de la UNESCO para América Latina y el Caribe (2008). Segundo estudio regional comparativo y explicativo: Los aprendizajes de los estudiantes de América Latina y el Caribe. Chile: Laboratorio Latinoamericano de Evaluación de la Calidad de la Educación.
- Pascarella & Terenzini (2005). *How college affects students: A third decade of research.* San Francisco: Jossey-Bass.
- Programa de Investigaciones Meta Matemáticas. (2007). La educación matemática en Costa Rica: Ideas y recomendaciones. *Cuadernos de investigación y formación en educación matemática*, 2(3), 187-197. Retrieved from www.cimm.ucr.ac.cr/cuadernos/cuaderno3/cuaderno3\_d2.pdf
- *Resumen legislativo.* (2009). Retrieved from http://asamblea.racsa.co.cr/actual/boletin/2009/may09/22may09.html.
- Universidad de Costa Rica (2009). Normas generales y específicas para la formulación, *ejecución y evaluación del presupuesto de la Universidad de Costa Rica.*
- Rindfleish, J. (2003). Segment profiling: Reducing strategic risk in higher education management. *Journal of Higher Education Policy and Management, 25*(2), 147-159.
- Rodríguez, R. (2008). *Cifras relevantes de la educación superior 2000-2008.* Costa Rica: Consejo Nacional de Rectores.
- Ruiz, Á. (2001). La educación superior en Costa Rica. Costa Rica: Consejo Nacional de Rectores.
- Salmi, J. & Hauptman, M. (1996, September). *Innovations in tertiary education financing: A comparative evaluation of allocation mechanisms*. Washington, D.C.: The World Bank.
- Secretary's Commission on Achieving Necessary Skills (1991). What work requires of schools: A SCANS report for America 2000.
- Southern Christian University (2009). Welcome to the extension page of Southern Christian University. from http://mwww.scu.ac.cr/index.htm
- Stadtman, V.A. Academic adaptation: Higher education prepares for the 1980s and 1990s. San Francisco: Jossey-Bass.
- Universidad de Costa Rica (2009). Normas generales y específicas para la formulación, *ejecución y evaluación del presupuesto de la Universidad de Costa Rica.*
- Van Vught, F., Bartelse, J., Bohmert, D., Burquel, N., Divis, J., Huisman, J., et al. (2005). Institutional Profiles - towards a typology of higher education institutions in Europe. Brussels, Belgium: European Commission. DG for Education and Culture.
- Villegas, J. (2008). MEP mantiene polémico sistema de nombramiento. La Nación.
- Villegas, J. (2009). Matrícula desborda sede central de nueva U pública. La Nación.
- Vincent-Lancrin, S. (2008). Introduction to the guidelines for quality provision in crossborder higher education: The context. Paper presented at the Quality Assurance

in Transnational Education: From Words to Action. Retrieved from www.ond.flanders.be/.../LondonSeminar\_StephanVincent-Lancrin.ppt

- Vossensteyn, J.J. (1999). Where in Europe would people like to study? The affordability of higher education in nine Western European countries. *Higher Education*, *37* (2), 159-176.
- World Bank (2009). Education at a Glance: Costa Rica. Retrieved from http://siteresources.worldbank.org/EXTEDSTATS/Resources/3232763-1171296190619/3445877-1172014191219/CRI.pdf.