

# **Éire Higher Education: What America Can Learn from Ireland**

**The Irish and U.S. Higher Education Roundtable**

Executive Doctoral Program in Higher Education Management

The University of Pennsylvania

Class of 2013

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## Foreword

In July 2012, the executive doctoral class of 2013 from the University of Pennsylvania's Higher Education Management Program in the Graduate School of Education conducted an in-depth comparative study of higher education in Ireland. The international study, an important component of the executive doctoral program, was structured to model research that we completed on the relationship between public policy and performance in five U.S. states: Georgia, Illinois, Maryland, Texas and Washington (<http://www.gse.upenn.edu/irhe/srp>). This research provided the foundation for the students' research. Students examined four performance areas related to Irish higher education: 1) preparation and participation for post-secondary education; 2) completion of certificates and degrees; 3) affordability for students and families; and 4) research. Students were divided into teams to collect and analyze data on these performance areas within the broader historical, political, economic, and social context of Ireland.

After an intense period of preparation, students spent a week interviewing higher education administrators and faculty at seven Irish universities and Institutes of Technology. These interviews were supplemented with interviews with the Higher Education Authority and a review of relevant documents and data related to Irish higher education. To better understand the context of Irish higher education, students also attended lectures entitled: The Rise and Fall of the Celtic Tiger, the Irish Potato Famine, and Teaching and Learning in Ireland.

Teams of doctoral students were organized according to the performance areas. Each team conducted research and presented a final report based on its data collection and analysis to Irish leaders and delegations from the five U.S. states at an Irish/U.S. Higher Education Roundtable. Students also presented their findings to the Minister of Education and Skills, Ruairi Quinn.

This report reflects the lessons learned from the student research and the Roundtable discussion.

We would like to acknowledge the research of the executive doctoral students of the class of 2013 that contributed so much to this report and findings. Members of the Class of 2013 include: Xavier Cole, Melanie Corn, Noemi Crespo, Mahesh Daas, Gretchen Dobson, Stacia Edwards, Allan Gozum, José Guzman, Jim Lai, Linda Luciano, Kiernan Mathews, Amy McCormack, Peggy McCready, Betsy Newman, Mercedes Ramirez-Bartolomei, Philip Rogers, Sean Ryan, Sal Salcido, Aslan Sarinzhapov, Candace Thille, Melissa Trotta, Hoopes Wampler, Wayne Williams, and Becky Wyke.

In addition, we also appreciate the assistance of two other student-team leaders, Aims McGuinness and Blake Naughton, the counsel and advice of Alan Ruby, and Patrick Callan, who moderated the Roundtable. Jon Marcus, writer and editor, drew on the students' presentations and Roundtable dialogue to draft this report.

We would also like to express our sincere gratitude to Irish government and higher education leaders who met with us and gave generously of their time. We especially thank Tom Boland, CEO, and Malcolm Byrne, director of communications, of the Irish Higher Education Authority. Both Tom and Malcolm worked closely with us to coordinate our visit to Ireland.

We invite any comments and suggestions on this report.

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The Irish like to say that you can tell it's summer when the rain gets warmer. But for tens of thousands of Irish secondary-school students, the harbinger of summer is the Leaving-Certificate exams.

Day after day, for more than two weeks each June, some 61,000 of these 16- to 19-year-olds find their places in straight rows of seats in classrooms silent but for the nerve-shattering footfalls of stern-faced proctors. Beginning at the stroke of 9:30 every morning, and often until after 5 p.m. each night, they labor over "Leaving-Cert" exams in at least six subjects, including compulsory Irish, English, and math.

It's hard, high-stakes, and harshly rigid. And it appears to be one of the reasons Ireland has become among the world's leaders in the number of students who go on to higher education—and manage to graduate on time with university degrees.

That's because the Leaving Cert helps line up academic expectations among secondary schools and universities or institutes of technology, where there is little such coordination in the United States. It means, among other things, that Irish students learn much of what they need to know to cope with college, while half of Americans entering community colleges and 20 percent enrolled at four-year universities are caught in the ambition-smothering spiral of having to retake math, writing, and reading in remedial programs, which thwart 40 percent of them from ever getting past that point. In Ireland, an equally inflexible centralized admissions system also channels students into the equivalent of academic majors comparatively early in their academic careers, discouraging the sort of drift that often derails their counterparts in the less-structured, more forgiving American system.

"In many ways this system contributes to Ireland's high participation and completion rates because of the lack of flexibility to shift across programs of study within institutions or to transfer across institutions," says Betsy Newman, vice president of student affairs and program strategy at

### **The Findings**

**The findings are drawn from presentations by executive doctoral students (Class of 2013) to Irish leaders in government and higher education, as well as American participants in a national roundtable discussion.**

**For more details on research findings presented by the executive doctoral Class of 2013, see links below:**

[Context for Irish Higher Education](#)

[Access and Preparation Study Group](#)

[Completion Study Group](#)

[Affordability and Finance Study Group](#)

[Research Study Group](#)

Babson College and part of a team of students from the University of Pennsylvania’s Executive Doctoral Program that visited Ireland in July for an 11-day fact-finding mission culminating in a day-long roundtable with Irish education leaders in Dublin. “It does demonstrate the need for much better alignment between secondary and higher education in the U.S. in ways that reduce significant gaps in college readiness, large investments in remediation costs, and delays in progression to degree.”

There are other incentives at work that contribute to the Irish success in degree completion, of course, including a system of limited-time subsidies and grants that makes taking longer than four years to finish university expensive, and attending less than full time very difficult. And Ireland benefits from having a homogenous population that is nearly 85 percent white, compared to a university-aged constituency in the United States that is increasingly nonwhite, low income, and from families without the experience of having gone to college.

The outcome is a younger generation that, in Ireland, is far more educated than the one before it. Propelled by generous public support for higher education made possible by the economic boom of the 2000s, the nation has rocketed to fifth among the 32 members of the Organisation for Economic Co-operation and Development in the proportion of the population with a university degree, while the United States has plummeted to 16<sup>th</sup> in this measure. In a mirror image of what’s happening in Ireland, American young people may, for the first time, soon be *less* well educated than their baby-boomer parents. (See Table 1)

**The Findings**

- Ireland’s rigid high school “Leaving Certificate” helps align primary and secondary schools with university expectations, reducing the need for remediation and resulting in higher rates of postsecondary completion than in the United States.
- The inflexible Irish centralized admission system contributes to high completion rates, as it is difficult to change courses of study, while more than a third of American students change majors.
- The time limit on grants push Irish students to earn their degrees on schedule, which far fewer Americans manage to do. Meanwhile, maintenance grants protect many Irish students from having to work to pay tuition, something that cuts deeply into U.S. higher-education completion rates in the U.S. However, there remains opportunity for improving completion rates at Irish Institutes of Technology (IoTs).

**(Cont.)**

Source: OECD

**Table 1: Educational attainment as a proportion of the population**

	25-64	25-34	35-44	45-54	55-64
	2009 or latest available year				
Ireland	35.9	47.6	39.4	28.2	20.2
United States	41.2	41.1	43.1	39.9	40.8
OECD average	30.0	37.1	32.1	26.9	22.4

Both systems, of course, have many things in common, too, most notably extreme financial challenges. Both are trying to do more with less—in the case of Ireland, where bust has followed that dramatic boom, much, much more with much, much less. Both are struggling to increase college participation and completion, both almost entirely for economic reasons. Both have barriers that block easy movement to universities from shorter duration programs, at colleges of further education and institutes of technology in Ireland and community colleges in the United States. Both are trying to sync up graduates’ skills with workforce needs. And both are working to increase college-going rates of older-than-traditional-age students.

As in American states like Georgia, Maryland, and Texas, Irish universities are less successful at graduating students from lower socioeconomic backgrounds; in spite of high rates of both graduation and unemployment, the country has to import people with such specialties as language proficiency, just as places including Washington state have deficits of people with technology skills. And student costs, though still relatively low, are spiraling, as they are in many U.S. states, including Illinois.

Both countries are trying to replace roller-coaster funding models that cannot keep pace with the demand for services and decline in government support. And in both places there is concern that a focus on research as a means to economic development—and, in Ireland, recovery—may overtake both teaching and purely academic, basic research. Shaky funding for doctoral and post-doctoral students in Ireland, meanwhile, threatens to trigger an exodus of talent.

Those are only some of the pressures on an increasingly demoralized Irish higher-education system. A looming demographic boom in the number of traditional-age students and a goal of even further increasing participation threatens to overwhelm already at-capacity universities, even as they

#### **The Findings**

- Irish universities, like many American ones, are less successful at graduating students from the lowest socioeconomic backgrounds, who could benefit from more academic support.
- Irish higher education offers too few incentives for adult students to enroll. More flexibility is needed about where, when, and how courses for adults can be offered; adults should also receive more advising and other support. Financial aid is also needed for part-time students.
- Doubling the student-contribution charge and instituting a graduate-tax or student-loan system—as has been proposed—will worsen the affordability dilemma for Irish students, especially those from low socioeconomic backgrounds. This is exacerbated by the fact that Irish families accustomed to the free-fees scheme cannot borrow against home values due to the recession.

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also cope with massive budget cuts and try to attract more full-fee-paying, non-European Union students to generate revenue.

Ireland's higher-education system already spends less than half as much per student as universities in the United States. A bid by Irish institutes of technology to elevate their stature could still more thinly stretch the system's limited financial resources.

It's even more impressive, then, that Irish higher education succeeds in the all-important measures of recruitment and completion, where improvement has largely eluded U.S. universities and colleges that are losing far more students, at more transition points, than their counterparts in Ireland. And Ireland has a plan for its higher-education system, with political support behind it. In most American states, there are similar goals for educational attainment, but no real plan.

"We've done well," says Tom Boland, chief executive of Ireland's Higher Education Authority, or HEA. But, he adds, paraphrasing William Butler Yeats, "In a world that's changed utterly, higher education, too, can't stand still. There's a very strong view in government and it's fair, that the status quo can't be maintained. We need a different kind of system, retaining the best of what we have and addressing some of the defects, as well as doing things in an entirely different way."

Which is something the Irish and Americans may be able to learn from each other.

"This is about the struggle of successful systems to transform themselves," says Patrick Callan, president of the U.S. National Center for Public Policy and Higher Education. "It is an explicit attempt to envision higher education and its role in society. And that might be harder than what we've had to do at any time in our history." For a nation with a history as long and literary as Ireland's, its success in higher education is comparatively recent. As late as 1960, only 10 percent of Irish young people went on to any form of higher education. But funding reforms including free secondary education in 1967 raised that to 20 percent by 1980, and

### **The Findings**

- A looming demographic boom threatens to overwhelm Irish universities already coping with budget cuts and a directive to further raise participation. Simultaneously Irish institutions are recruiting non-EU students to bring in revenue and contending with students fleeing U.K. universities that imposed higher tuition this fall. Because the "Croke Park Agreement" between government and public-sector labor unions representing faculty prevents further reductions in university pay until at least 2014, class sizes are increasing and cuts have been made in student services and administrative staff.
- There is significant duplication and a lack of communication that leads to wasted resources in Irish higher education. Little is known about how much can be saved by merging the administrative functions of Irish higher-education institutions in the same regions.

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the “free-fees” scheme for higher education that began in 1996 has elevated it to 65 percent today, with a goal of 72 percent by 2020. In the United States, which also has a goal of raising the proportion of the population that is college educated, the share of high-school graduates who now go on to college is about 68 percent, down from 72 percent in 2009. (See Table1)

The free fees never were truly free; although they covered tuition for all first-time Irish and EU undergraduates, there was still a student contribution even in that first year, of €300, or \$370, intended to cover such things as exams and sports club and student society memberships. But that was far less than the previous tuition of about €2,000, or \$2,741. The government also provided maintenance grants to help some low-income students with their costs of living; even today, 44 percent of Irish students receive such grants, though the total number of eligible recipients is up 25 percent since 2008 while the amount available for them has been cut by 23 percent, with additional reductions of 2 percent planned for this year and 1 percent in each of the next two years.

This combination of financial support plays an important role in steering Irish students to full-time study, four-year as opposed to two-year degrees, and, eventually, earning those degrees on time. That’s because they’re no longer fully covered if their grades fall and they have to repeat a year of their degree programs, enroll in programs of less than two years, take more than four years to finish, or attend school part time. Nearly half of American public-university students, by comparison, now work more than 20 hours a week—many of them to help pay for their tuition—and nearly 25 percent of community-college students at least 35 hours a week, a burden that contributes to the nation’s abysmally low graduation rates. Only about a quarter of these students ever earn degrees, according to the advocacy organization Complete College America.

#### **The Findings**

- At a time when Ireland wants to increase access to postsecondary education, further education is both a weak link and a potential solution. Transferring from institutions of further education to universities and IoTs (and, for that matter, among the IoTs and universities) is difficult, which is a barrier to increasing the participation of disadvantaged and underrepresented groups. Yet further education has not been given a significant voice in the Irish higher-education agenda.
- Proposals by almost all the IoTs to become “technological universities” threaten to further dilute already thinly stretched Irish higher-education resources.
- There is a need for more coordination of all types among Irish further- and higher-education institutions. There is vocal leadership in each branch of the higher-education system, but little coherence or communication among them, and a perception that no one speaks for everyone. Higher-education officials say they want to see the Higher Education Authority, like U.S. university boards of regents and trustees, advocate for all of these institutions before the government.

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There are, in fact, far fewer dropouts among Irish grant recipients than not only Americans, but than Irish students who do not receive grants, since their greater financial security means they're less likely to have to work part time but are required to keep their grades up and their credits coming in so that the money will, too. While American Pell grants do require satisfactory academic progress, the loans on which U.S. students increasingly rely do not. They also don't have time limits.

This no-nonsense, heads-down, straight-ahead approach in Ireland begins with the Leaving Certificate and continues with the centralized admissions process instated in 1976 and administered by the Central Applications Office (CAO) in Galway. It's an anxiety producing process—"firm but fair, harsh but transparent," as Ivor Gleeson, who heads the CAO, describes it. The application period ends each February 1, and students get offers from mid-August through early September, based on their exam results, for the academic year that begins almost immediately. Applicants can list 10 areas of interest in order of preference, but if they ultimately decide to forgo their first choice, they won't necessarily be admitted to their second. And while it's possible to change the equivalent of an academic major, it's not easy.

Whether this is the best way to admit students to universities is fairly constantly under discussion in Ireland, including at a conference in the spring where speakers agreed that other measures than exam results were needed to ensure student diversity—the quality and type of an applicant's secondary school, for instance, and his or her family history and work experience. But the process does create a seriousness of purpose in Irish teenagers that requires them to make some hard decisions U.S. students don't yet have to when they first apply to college. Americans drift through their university careers while making up their minds about a major, taking an average of 63.5 credits in certificate programs that should require only 30, nearly 80 toward associate's degrees they could have gotten with just 60, and 136.5 on their way to bachelor's degrees that needed only 120, Complete College America reports.

#### **The Findings**

- In both countries, there is concern that a focus on applied research and return on investment may be shortsighted and cut into basic research. In addition, unstable funding for doctoral and post-doctoral students in Ireland threatens to trigger an exodus of research talent.

Still, even without a viable solution to the deep financial crisis, Ireland's transformational strategic plan is much more far-reaching and ambitious than the comparable incremental higher-education plans of American public-university systems.

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“We have reverse challenges,” says David Spence, president of the U.S. Southern Regional Education Board. “What we do not do well in the States is, once students are in colleges and universities, getting them to complete something. One of the problems is, we don’t require our students to declare a major until the second or third year. We let our students come in and take as many credits as they want until they make up their minds what to do, leading to very low completion rates and a very, very inefficient system. We’ve got to do much better in expecting earlier choice.”

The results are evident in the two countries’ graduation rates. Ninety-one percent of students who pursue the highest level of bachelor’s degrees at Irish universities complete their programs on time. Even at institutes of technology, whose students are generally considered less prepared for higher education, 75 percent earn their certificates or degrees on time. That compares to only slightly better than half of American students who finish their four-year degrees within even six years, and fewer than a third at community colleges who wrap up their two-year programs within three.

In the United States, of five states studied in depth by the Institute for Research on Higher Education at the University of Pennsylvania Graduate School of Education—Georgia, Illinois, Texas, Maryland, and Washington—Texas has the most comprehensive legislation linking high school to college. Students take end-of-course exams in their junior year that have been aligned with first-year college courses. If they pass, they are exempted from remedial education when and if they do enroll in higher education; if they don’t, they still have their senior years in high school to continue to prepare. The system also forces high schools and colleges to agree on the substance of what they teach. Most of the other states have weak alignments between secondary and postsecondary education.

There was also very little research under way at Irish universities until the mid 1990s, since which time the country has built an infrastructure for research that has produced international-caliber results. In 1997, the research budget in the Department of Education was zero. Beginning in 1998, the Program for Research in Third-Level Institutions and other government initiatives committed billions of euros to research, peaking in 2008 at nearly €1 billion annually, or \$1.2 billion. Publishing doubled, and Ireland produced the 11<sup>th</sup> highest number of scientific publications cited worldwide. There was a sixfold increase in the number of startup companies created; the pace of licenses assigned leapt by a factor of seven. Patent applications rose 22 percent, to 14<sup>th</sup> in the EU,

and the number of patents granted by 63 percent, or eighth per capita in the EU. In June, *Scientific American* ranked Ireland eighth among 50 countries in biotechnology research, and third in the category “education and workforce.”

Because so many of such projects entered the pipeline before the economic crisis, the country has continued to add new facilities and equipment—€692 million, or \$855 million, worth since 2006—which is why, in the midst of austerity, Ireland’s universities (like its airports, roads, and other infrastructure, and many of its empty office buildings and residential subdivisions) look surprisingly new. University College Dublin was at one point the busiest construction site in Ireland.

All of this, of course, like the government’s largesse with students, was made possible largely by the Celtic Tiger. Ireland’s gross domestic product famously grew by a dramatic 9.5 percent a year between 1995 and 2000, or a total of nearly 60 percent in real terms, compared to less than 16 percent for the EU as a whole and 20 percent in the U.S., and by 5.5 percent a year from then until 2007. Unemployment fell from 18 percent in the late 1980s to an enviable low of 4 percent.

But when the economic downturn came to Ireland, it landed with an equally notorious crash. The collapse of capital and trade markets drove unemployment to nearly 15 percent. Home values fell by 47 percent, incomes declined, and poverty increased. By 2010, Ireland had the largest deficit as a percentage of gross domestic product in the world and was forced to accept a bailout of £67 billion, or \$106.2 billion, from the European Union and the International Monetary Fund and agree to strict austerity.

In the resulting bout of budget meltdown, higher education spending was cut 5 percent in 2009, another 9 percent in 2010, still another 7 percent last year, and yet another 5 percent this year. Another 6 percent reduction is projected through 2015. Financial support for postgraduates has also been a victim of that enforced austerity. In all, the nation’s education budget has been cut by €1.1 billion, or about \$1.4 billion, since the start of the economic crisis. Funding per student in Ireland is 30 percent lower than funding per students in the almost equally cash-strapped U.K. Even before the economic crisis, Ireland’s spending per student fell faster than that of all but four of the 31 other OECD countries, thanks to an increase in enrollment from 40,000 in 1980 to 120,000 in 2000, and more than 160,000 in 2010; although the government has explicitly promised that Irish higher-education will help drive the economic recovery, its allocations for the sector, per student, dropped

another 18 percent over the last three years. And enrollment is expected to nearly double again by 2030 (though these projections are being recalculated and may be revised).

There had been predictions of this crisis. As early as 2003, the OECD reported Irish higher education to be unusually dependent on public funding, and therefore vulnerable to declines in revenue. In 1995, the government's share of spending for higher education in Ireland was about 70 percent, compared to the OECD average of 77 percent. By 2000, it reached 79.2 percent, while the OECD figure had slipped to 75 percent. And by 2006, the share of public support in Ireland had grown to 85 percent, significantly above the then-OECD average of 70 percent.

The generous free-fees scheme not only made it harder for officials to downplay the resulting increase in mandatory fees for students than it has been in the United States, where universities like to say they've moderated spikes in tuition but continue quietly boosting fees; it also left the Irish higher-education system particularly vulnerable to government belt-tightening. "Once the fees were taken out in the 1990s, a perfectly well-functioning system had one of its foundations taken out," says Mary Canning, a member of the HEA.

The annual student-contribution charge has now ballooned from €2,000, or \$2,470, last year to €2,500, or \$3,090, this academic year, even after 20,000 students from across the country marched in protest and despite the fact that average weekly earnings for those in Ireland who have managed to hold onto their jobs has declined from €704 (\$886) in 2008 to €691 (\$869) today, making higher education less and less affordable for middle-income earners who are largely ineligible for tuition and attendance subsidies. (Irish higher education still costs much less than the average net price of \$8,244 for tuition and fees for in-state students at four-year public universities and around the same as the \$2,963 price of attending public two-year community colleges in the United States, where median household income is almost 30 percent higher than in Ireland.)

"We learned that like HOPE in Georgia and the Kalamazoo Promise in Michigan, Ireland's free-fees policy seemed like a great deal until money got tight," says Kiernan Mathews, director of the Collaborative on Academic Careers in Higher Education at Harvard University and another Penn executive doctorate student. "Then it dawned on everyone that scarce resources were being spent on those who can afford to pay for college anyway."

There's still anger. "Taxes are increasing, salaries are being cut, and politically, there has been a very cynical feeling about fees," says one official. Adds one Irish student: "We want institutions to become more efficient before we are willing to empty our pockets." Yet a report in

May raised the prospect that, by 2015, the student-contribution charge will be increased again, to more than twice its current level. Even then, it won't nearly cover the actual cost of funding a year's education, which ranges from €7,000 a year, or \$8,650 in the humanities to €30,000 a year, or \$37,000, for medicine or dentistry, and averages €10,000, or \$12,356, a year.

The escalating student-contribution charge, combined with a cut in grants, has already forced more families to take out loans, according to credit-union officials; after all, thanks to the free-fees scheme, and unlike Americans who start college savings account for their children practically at conception, few had any reason to put money away for tuition. Trouble is, high unemployment or stagnant wages and the housing crash mean few Irish families have equity against which they can take out student loans. Trinity this fall, in collaboration with the Bank of Ireland, will start making loans at 5.1 percent interest to families to cover the student contribution charge so they can pay it in installments of €100, or about \$124, a month. If the loan is not repaid by the time the student graduates, however, the interest rate will rise to nearly 10 percent. A typical Irish student living away from home now faces expenses over the nine months of school of about €7,470, or \$9,230, and students living at home €3,789, or \$4,682, according to research conducted at the Dublin Institute of Technology's Office of Campus Life.

Cuts in other government departments are also taking a toll. At the secondary level, the number of guidance counselors has been cut back. Day-care centers for students with children at colleges of further education in Dublin and in counties Cork, Clare, Limerick, and Carlow have been closed because of funding cuts.

The so-called Croke Park Agreement with Irish public-sector labor unions prevents until 2014 further reductions in university employee pay, which was slashed by a collective \$73 million in 2010, and since 80 percent of higher-education budgets go to salaries and pensions, cuts have instead been made in such areas as student services. Lecturers saw their pay reduced by 15 percent in 2010. Class sizes are increasing, and there are fewer administrative employees. There's also a moratorium on recruitment for public-sector jobs, which began in 2009, though higher-education institutions were allowed to continue to fill essential positions under a system called the Employment Control Framework, as long as they agreed to cut 6 percent of jobs overall between 2008 and 2010. (They ultimately trimmed more than 7 percent.)

That has resulted in further anger and frustration since, in the last days of the previous government, universities were told that all new hiring had to be approved by the HEA—even for

jobs paid from grants or outside contracts. The HEA later backtracked on having to sign off on such appointments, but a revised Employment Control Framework called ECF2 maintains some other contentious restrictions on hiring and promotions through at least 2014. The idea has been variously labeled Orwellian and Stalinist, and one university research project reportedly has refunded part of an external grant because it was stymied in using the money to hire workers.

If all of that was not enough to compel a rescue plan, Irish higher education was last year knocked out of the top 50 (Trinity) and top 100 (University College Dublin) of the QS University World Rankings. For the first time ever, no Irish university at all ranked in the top 100 of the *Times Higher Education* international rankings, in which Trinity tumbled 41 places to 117<sup>th</sup> and UCD fell 65 spots to 159<sup>th</sup>. In his inaugural speech, National University of Ireland Maynooth President Philip Nolan warned that continued cuts would produce mediocrity, and delays in coming up with a funding mechanism were only doing more harm. “We have no right to mortgage future generations by dodging this issue,” echoed Patrick Prendergast in his inaugural address when taking over as provost of Trinity. “They will not thank us.” Prendergast called for charging students more. So has the president of University College Cork, who says that student-contribution fees of at least €5,000, or \$6,178, are needed to maintain the quality of Irish higher education. “The model of higher education that we all have is an unsustainable model, in the sense of the demand it makes on students or on the exchequer,” says Boland. “Not only in Ireland, but internationally, higher education is becoming unsustainably expensive for governments and individuals.”

Meanwhile, even as budgets have been going down, enrollments have been going up by about 6 percent per year. Already stretched, the Irish universities have seen the annual number of applicants for places rise to more than 77,000, up more than 10 percent in two years. The number of students is expected to jump another 30 percent in the next 10 years, according to HEA projections. That’s partly due to the fact that the population is increasing. It’s also because, as in the United States, there’s broad understanding that degree-holders are more likely to land scarce jobs. Even though their earnings have fallen among the most sharply in Irish society, 85 percent of Irish 25- to 34-year-olds with university degrees at least have jobs, according to the Expert Group of Future Skills Needs; since many others in that age group are still in school or have emigrated, that comes out to better odds for employment than for people without degrees. Similar motivations have driven a 36 percent increase over the last five years in the proportion of full-time undergraduates who are over 23, and an 11 percent jump in the proportion who attend part-time. And more students are, in

fact, staying in school, enrolling in graduate programs and waiting out the economic downturn, according to the Central Statistics Office. “This lifeboat, and most others,” says one university administrator “is full.”

Meanwhile, tuition increases that took effect this fall in England, Wales, and Northern Ireland have driven up the number of applicants to Irish universities from those places by 27 percent this year, while reducing the number of Irish students who choose to study in the U.K. Top universities in England, Wales, and Northern Ireland have been freed to increase their tuition to the equivalent of €10,900 per year, or \$13,468. Just over 5,000 Irish candidates applied to U.K. universities this year, a 19 percent drop.

Irish universities are also actively recruiting non-EU, full-tuition-paying students from countries including Australia, China, and India as a means of generating revenue. Foreign students spend an estimated average €26,000, or \$32,125, per student, per year in Ireland, and every 100 foreign students are estimated to sustain 15 local jobs. Trinity, for instance, is recruiting directly from top U.S. high schools and from Asia and East Asia. Along with making money from tourism, merchandise, and commercializing products developed in the lab, recruiting from abroad is “a more important consideration than it would have been in the past,” says Vinny Cahill, Trinity’s vice president for research. Then again, while non-EU students may pump money into the system, they add more stress to institutions already near capacity, and require additional support.

Last year the National Strategy Group on Higher Education—known colloquially as the Hunt Report, after its chairman, economist Colin Hunt—did present a plan to deal with all of these pressures. It said there was a need for an additional €500 million per year, or \$618 million, to €1.8 billion for higher education by 2020, just to keep up with expected enrollment growth. Though widely accepted by higher-education interest groups, what the Hunt Report didn’t do was settle on a way to raise that money, although it did recommend greater support of higher education through philanthropy and commercialization of research, both of which can take years before producing significant revenue. Philanthropy, to date, has played virtually no role in higher education in Ireland, and while commercial partnerships and research have promise, few institutions have yet realized substantial returns from them.

The very fact that Ireland has a relatively ambitious strategic plan for higher education, whatever its prospects for success, puts it far ahead of the United States by this measure, however. There, especially in the five case-study states, such plans are far more incremental and less bold.

Then again, there's no financial plan to address the Hunt Report's goals of serving increasing demand, creating flexible delivery and part-time options for working and older-than-traditional-age students, improving teaching, enhancing research, encouraging collaboration with business, or connecting further education with higher education.

In the United States, among the five states studied by the Institute for Research on Higher Education, Maryland has a comprehensive finance strategy to support its educational attainment goals. It links student tuition to growth in median family income, relies on a corporate income tax to avoid great volatility in institutional appropriations during recessions, and has increased student financial aid. It also sets targets for increased efficiency. All of these measures have received broad political and institutional support.

In addition to doubling the student-contribution charge, the Irish HEA is now considering proposals including instituting a graduate tax or student-loan system like the one that has sent all those students fleeing England, Wales, and Northern Ireland. "There is huge angst in the system that there will be student tuition down the road," says Lewis Purser, director for academic affairs at the Irish Universities Association.

That will only worsen a funding and affordability dilemma for higher education in Ireland not unlike the one that many American states are facing: public funding and staffing cuts combined with enrollment growth and rising tuition during a period of stagnant wages, high unemployment, and lack of financial security caused by the banking and housing crises.

There's also a spotlight on that national goal to increase the number of secondary-school students who proceed to college. "There's a huge pressure coming in terms of numbers," says Lisa Looney, dean of graduate studies at Dublin City University. "You can have all the aspiration you want, but if you don't have the places, the aspirations are irrelevant." Paul Giller, vice president for academic affairs at University College Cork, says, "If demand is high and resource is low, quality suffers. If you want to maintain quality, you have to temper demand." Adds Boland of the 72 percent participation goal: "I know that's still stated government policy, but whether it's practical government policy, I don't know. Is higher education about giving the maximum number of people an opportunity to develop, or is there a point at which a country can say, 'This is as much as we need and can afford.'"

Squeezed universities aren't entirely biding their time until someone comes up with an idea to save them. With necessity the mother of invention, they've been finding ways to do more with

less, devising operational efficiencies American ones are also being pressed to try. The otherwise disappointing *Times Higher Education* rankings nonetheless put Ireland sixth in university performance relative to gross domestic product, ahead of the United States (16<sup>th</sup>) and Germany (12<sup>th</sup>). The United States spends more than twice as much as Ireland, per student, according to this calculation, with a success rate only slightly better than half as good.

Collaboration is one way Irish universities are saving money. Dublin City University and Dundalk Institute of Technology have teamed up to provide joint academic programs and services and conduct research together. Strained for resources, other Irish universities, too, have started to work together to cut costs, beginning with the Innovation Alliance between Trinity and University College Dublin. National University of Ireland Galway has joined with the University of Limerick and Dublin City University with NUI Maynooth and the Royal College of Surgeons in what is known as the 3U Partnership, pooling biomedical research and international student recruitment and offering joint academic programs. For example, this year the three will run a joint electronic-engineering program, with classes in digital circuits at DCU and in analog circuits in Maynooth.

The HEA believes there's still more money to be saved from merging the administrative functions of regional institutions, though campus business administrators privately question this. Cooperation among institutions to avoid overlap and competition could help trim costs, but mainly through teaching staff reductions, which remain difficult given the restrictions of faculty employment contracts. Smaller institutions receiving state funding are also being encouraged to consider mergers, suggesting that the government may ultimately withdraw some or all of its financial support for them, but the allocations that go to these smaller schools are relatively slight. And the amounts that will actually be saved are unclear, says Mathews. "Naturally, we asked how much they expected to save," says Penn student Mathews. "No one with whom we spoke really knew. There were no financial models."

Still, that any cooperation at all may occur is noteworthy in a sector that has historically been fiercely self-sufficient—even aloof. "The HEA at its worst was made up of a team of academics from the various universities who would have made Lehman Brothers look like a crowd of Franciscans," says Ruairi Quinn, Irish minister for education and skills. "They have this legacy of being independent." And now, autonomy in one part of Irish higher education is turning another against it. Most of the 30 fastest-growing schools in Ireland aren't the universities. They're the colleges of further education—as opposed, in terminology, at least, to *higher* education. Those in

Dun Laoghaire, Killester, Sallynoggin and Dundrum report enrollment increases of at least 50 percent in the last 10 years.

Most of these colleges of further education operate under local vocational-education committees, and most offer one-year programs resulting in Level 5 or Level 6 awards in such specialties as beauty therapy, hairdressing, and accounting that are comparable to certificates from equally fast-growing American community colleges. These can lead directly to jobs, but, as in the United States, some students use them as a path to universities and institutes of technology. Last year, about 14,000 Irish students who graduated from colleges of further education applied to higher-education institutions.

At a time when Ireland wants to increase access to and attainment of postsecondary education, further education is seen as both a weak link and a potential solution. “Further education has been the Cinderella of education in Ireland,” one business leader says. “It has developed despite policy, not because of it.” Joint-degree programs would help. So would a funding process that creates a coordinated postsecondary-education system. But using the further-education sector to best effect will require “a change of mindset that there is value in all transition routes and steam behind all of them,” says Orla Christie, senior policy analyst at the National Office for Equity of Access to Higher Education. If that doesn’t happen, graduate student Newman says, “The lack of a comprehensive education policy and coordination between the different sections of the Ministry of Education could be a major barrier to change in Ireland and to expanding the pipeline to higher education among disadvantaged and unrepresented groups. To even imagine the possibilities for innovative change in the higher-education sector, further education must have a place at the table.” As things stand now, however, she says, “Further education has no voice in the higher-education arena in Ireland or significant role in advancing the higher-education agenda.”

There is, concedes Irish Universities Association CEO Ned Costello, “very little cooperation between further education and higher education. You have kids trying to go onto higher education when they should go to further education. Some further education has a bad reputation and people don't want to go there and try to send their kids to IoTs or universities. The two sectors just don't talk to each other and we have been trying to bring the two together to improve. . . . It is really bad, and it doesn't work, and it is something that we want to see improved a lot.”

Of course, the same problems exist in the United States. In Georgia, one of the five states studied by the Institute for Research on Higher Education, for example, students have trouble

transferring from technical colleges to the University System of Georgia.

In Ireland, Institutes of technology, or IoTs, which also are enrolling an increasing share of students, reserve some spaces for graduates of colleges of further education in programs to which their studies are related—most commonly, nursing. Some universities hold seats for them too, but in very small numbers and in only a few majors, though further-education graduates also can compete with candidates who have Leaving-Certificate scores for admission to unreserved places at the universities under a complicated formula that gives them points for prior study. How many are accepted is hard to gauge, though a few colleges of further education estimate that about half their graduates go on to IoTs and universities.

The divides among these—colleges of further education, IoTs, and universities—are “almost concrete walls,” as one official puts it. There is “very little cooperation between further education and higher education. The two sectors just don't talk to each other,” says another. As among American community colleges and four-year universities (“We do a terrible job of letting students transfer without a loss of credit,” says Spence; “that’s where we lose our money, in a very inefficient transfer system.”), transferring from Irish colleges of further education to IoTs or universities and from IoTs to universities can be a challenge. It’s a major pinch point costing Irish higher education uncounted numbers of potential graduates and wasted resources. Despite the development of the new National Framework of Qualifications, this provides an opportunity to improve the transfer process.

“The problem is one of implementation and not one of acceptance that this is important,” says the HEA’s Canning. “If you look at a country like Germany, which does this superbly—where there isn’t, shall we say, less value applied to a technical qualification—and you ask yourself, ‘What do they have that we don’t have,’ the answer is money.”

Others think the problem is less about money than elitism and prestige. “Someone coming in with a three-year certificate from an IoT would be lucky to get in as a second-year” at a university, says Jim Murray, an historian and director of academic affairs at the Institute of Technology Ireland who previously worked in a university admissions office.

Paul McCutcheon, vice president academic at the University of Limerick, on the other hand, says it was once easier to transfer from institutes of technology to universities, but that it’s now less necessary. That’s because the IoTs have begun to add the equivalent of baccalaureate programs themselves. Critics complain that this is mission drift at the institutes, which were previously called

regional technical colleges and were supposed to support local industry, but now offer arts and humanities courses that, in spite of Ireland's higher-education budget plight, duplicate those offered at the universities and at a time when enrollment increases and layoffs have caused student-faculty ratios at IoTs to rise at an even faster pace than at the universities.

Mission drift is not unique to institutes of technology; the number of university degree programs nationwide has spiraled from 220 to nearly 900 in the last 10 years, including more than 30 honors-degree engineering programs. "I would just be a little careful about some of the terms we're using," Annie Doona, president of the Institute of Art, Design & Technology Dun Laoghaire, says drily. Accusing the IoTs of mission drift, she says, "presupposes that there was a clearly defined mission. We drifted into Level 8 and 9 programs because that was what industry was telling me there was a need for. So sometimes it's not mission drift. It's mission change." (Similarly, in the United States, community colleges in Washington have started adding bachelor's degrees, while Georgia is eliminating public two-year colleges.)

Whatever people choose to call it, the IoTs are about to drive one of the biggest shifts in Irish higher education by converting themselves into technological universities. The idea came from the Hunt Report, which said there was no basis for adding new universities in Ireland, but that there was "a case for facilitating the evolution of some existing institutes ... into a form of university that is different in mission from the existing Irish universities." What were formerly called polytechnics in the U.K., after all, were also renamed universities, in spite of questions about their comparative quality. Irish IoTs have jumped at the chance to become universities and the opening to offer far more baccalaureate degrees, for which the government's funding formula allocates more money per student than for certificates.

The HEA agreed in February to new rules governing the establishment of technology universities, and invited applications. Almost immediately, Galway-Mayo Institute of Technology, Letterkenny Institute of Technology and the Institute of Technology Sligo, which have a combined 16,000 students, joined forces to bid for technological-university status. So did five institutes of technology in the border, midlands, and west region with a collective 27,000 students, which, if they win technological-university standing, would become Ireland's largest higher-education institution. The Dublin Institute of Technology and the institutes in Tallaght and Blanchardstown also want to become a technological university. And the institutes of technology in Waterford and Carlow are expected to be the first to succeed at it, considering that two cabinet members—

Environment Minister Phil Hogan and Minister for Public Expenditure and Reform Brendan Howlin—represent the region and support them.

The transformation of IoTs into technological universities is widely seen as being driven by local politics. “It is a response, quite frankly, to political pressure, and this is a democracy. That’s how we function,” Quinn says. University presidents strongly oppose it, saying such a move will further dilute severely limited resources and lower quality. The IoTs that want to see their status raised have shot back that the presidents are elitists, although some say privately that they’re going along with the idea simply so as not to be left behind.

Whatever the outcome, the technological-university dispute and the “concrete wall” that frustrates transfers among the colleges of further education, IoTs, and universities make clear the need for coordination among Irish further- and higher-education institutions, especially in a time of diminished funding. There may be vocal leadership in each branch of the higher-education sector, but there is little communication among them, and a perception that no one speaks for everybody. Higher-education officials say they want to see the HEA, like U.S. university boards of regents and trustees, advocate for all of these institutions before the government, and legislation is under discussion that would allow for this and “give us a fighting chance of working with these institutions to create a coordinated system,” says Boland—maximizing capacity, reducing duplication, and smoothing the movement of students. “There is a serious gap in trust and confidence between the key actors in this domain,” says Michael Murphy, president of University College Cork, “which should be the primary focus of our attention in the years ahead.”

It will be competing with a lot of other problems. Even as demand is up from older-than-traditional-age applicants, for instance, there is little or no financial support for them to go to college, and little provision for part-time students. “Current projections suggest that there will be an increase in the age of participation, yet we question whether that will happen and wonder if the incentives provided to mature students are strong enough to motivate participation,” says Peggy McCready, CEO and founder of a consulting company called Collective Learning Solutions and another Penn doctoral candidate. “For those mature students who want to go back to school, institutions will need to offer flexibility in where, when, and how courses can be completed, while also establishing funding for part-time students.”

NUI Galway is providing partial scholarships for all of 30 so-called mature students (meaning, in the Irish definition, people 23 or older), and Cork Institute of Technology for just one

over 23-year-old admitted to its program in biomedical engineering. In fact, mature students may be a better investment than traditional-age ones; despite the lack of financial or other support, far fewer drop out than new entrants who are under 23. But as the number of these students grows, higher-education institutions will need to adapt their modes of delivery and support for them. Failure to do that may lead to a steady decline in completion.

In spite of Ireland's high graduation rates, there are problems just beneath the surface in this area, too. One in four students in IoTs drop out, and dropout rates overall match up with socioeconomic status and the quality of secondary education. Students with lower Leaving-Cert scores, for instance, are more likely to quit. So are students without grants. And students who come from higher socioeconomic groups graduate at better rates than those from lower socioeconomic levels. The children of "higher/lower professional" families obtain the necessary credential to enter higher education well over 90 percent of the time, while "skilled/semi-skilled/unskilled manual" offspring qualify only 78 percent of the time, according to the Ireland Department of Education. Although participation from every social class increased between 1998 and 2004, disparities remain. One hundred percent of the children of "higher professionals" enter higher education, compared to only 27 percent from the "non-manual" workers group. (Students from better-off families also have access to training courses to improve their performance on the Leaving Certs.) Disadvantaged and nontraditional students are also increasingly arriving at universities and IoTs with inadequate preparation, prompting demands for remediation—in a system already strained. The same problems derail four in 10 underprepared American community-college students and costs \$3 billion a year in the United States.

There is some accommodation for less-privileged students in the Irish system. The Higher Education Access Route offers places for socioeconomically disadvantaged students with lower points on the Leaving Cert, and gives them extra support such as special orientation programs, designated mentors and advisers, extra instruction, study skills and exam preparation, and financial-literacy education, as well as some help with their living expenses.

IoTs are also working to improve completion by more clearly educating their students about course requirements. Galway-Mayo Institute of Technology, for instance, provides a "degree program profile" to help students see their way to the finish lines of their educations. But generally, advising in Ireland is inconsistent, and a lack of it appears to contribute to students dropping out. Most Irish higher- and further-education institutions rely for academic support on faculty, whose

autonomy under the tenure system protects them from compulsory service to students while an ingrained academic culture of controlling teaching loads and schedules provides additional barriers to counseling and mentoring. The University of Limerick sponsors a seven-week program for new students based on the philosophy that successful early adjustment is linked to subsequent success. The program teaches time management and study skills, health and wellness, and long-term planning. But it's an exception to the rule in a system that could benefit from additional student-support resources such as teaching-and-learning centers, writing centers, and math tutorials.

The application process, too, is short on information about options and realities of courses of study, which, in turn, leads to high levels of dissatisfaction. This lack of clarity and student misunderstanding leads some students to quit. In a survey of first-year students conducted by Dublin City, 25 percent said they had considered dropping out. The number one reason wasn't cost; it was that the course, or major, was not what the students expected. One IoT reports that, in 85 percent of cases, the reason students leave before graduating is that they selected the wrong course of study.

A lack of advising is a particular problem for nontraditional students, including those older than the conventional age, from lower socioeconomic groups, and with disabilities. Older students, especially those who are low income, usually prefer attending higher education part time—something funding policies do not support. Traditional full-time students receive four years of tuition and are eligible for financial aid, including maintenance grants, while part-time students have to pay both tuition and fees and can't get grants. Some industrial areas of Ireland, such as Tallaght, are strong markets for part-time courses, provided the funding structure is revised. One small step to address this, the Springboard program, made available several hundred free places in higher education for unemployed people seeking master's-level certificates in areas where there were shortages of skilled workers.

Research funding hasn't fallen quite as sharply as everything else—it's still at .65 percent of gross national product, compared to the EU average of .6 percent and the U.S. figure of .58 percent, though there's an expectation that it will begin to slide—but there is a new emphasis on applied research with quicker returns on investment that are easier to measure, versus basic research that takes longer but often underpins important discoveries. Of all research funding, 28 percent is now earmarked for applied research, up seven percentage points since 2009. "Getting the balance right between pure research on the one hand and having it applied in a manner that increases

employment—that’s the political conundrum,” Quinn concedes. “How do you balance that?”

Universities are also seeking ever more research euros, because research generates more revenues than teaching, while the introduction of technological universities is also likely to push the IoTs into the research game. Meanwhile, some are propping up their research budgets by using money meant for operations or drawing on reserve funds, a practice that is not only unsustainable, but may hurt teaching. That’s because, in order to win research funds from agencies like Science Foundation Ireland, an institution must already have capacity and demonstrate potential in a given research area. Yet another dozen or more years could pass before gains are realized from today’s innovations and it could take two decades for results from basic science research to demonstrate commercial returns. In spite of these problems, Mathews says, U.S. universities could take some lessons from Ireland’s research prioritization. “Georgia’s system, for example, has the breadth and coordinating authority to conduct such an exercise,” he says, referring to Georgia’s Research Alliance, through which the state has allocated money to encourage research partnerships among universities and technology companies.

Ireland has the same problem as Texas: oversized aspirations for research. Texas plans to create seven new research universities in a state where 40 percent of students are comparatively low achieving. American anti-tax sentiment means there will be little or no new money for this purpose, making it completely at odds with the goal of increasing the proportion of adults with postsecondary degrees.

Irish postdoctoral students, hired on two-year contracts and easy to lay off as budgets shrink, are in particularly tenuous positions. So are PhD students, who are funded for four years, even though few finish their doctoral work within that window—at one Irish university, as few as between 16 and 22 percent. Enrollment in doctoral programs is nonetheless up 65 percent in the last five years, leading to questions about whether industry can absorb these numbers. Only 30 percent of research-performing companies intended to recruit more PhD researchers through 2013, according to Forfás, the national agency for enterprise, trade, science, and technology. When they do hire, they favor experienced rather than newly minted PhDs. “There are lots of unemployed or semi-employed PhDs” in Ireland, says Tony Donohoe, the head of education at the Irish Business and Employers Confederation.

There are also questions about whether the fields in which degrees are being granted line up with the needs of the labor market in areas such as science. Between 2000 and 2005, science and

engineering degrees, as a percentage of all new degrees, declined by nearly five percentage points. Between 2002-03 and 2006-07, the number of PhDs awarded in the social sciences increased from under 50 to close to 150, while PhDs in science rose from just over 300 to slightly less than 450.

Universities are also contending with public suspicion about their commitment to sharing the burden of austerity, particularly as it relates to faculty workloads and salaries. That has fueled what Pat McLaughlin, president of the Institute of Technology Tallaght, calls “an increased national appetite for regulation. There’s almost a McCarthyism afoot nationally in terms of the nature of the accountability and mandate we have as institutions. We have auditors crawling over campuses in this country.” It’s an echo of American universities’ complaints about paperwork. “There is a requirement for public confidence in terms of what we do, but it becomes intrusive when you have to draw on resources to satisfy this level of regulatory requirements.” Still, also as in America, says Ellen Hazelkorn, dean of the graduate research school at the Dublin Institute of Technology, “I’m not sure higher education has been very good at that—demonstrating value and impact. There is increasingly an onus on higher education to really be better at demonstrating value and what you’re doing.”

Out of bad comes some good. The depressing reality of Ireland’s economic crisis has helped bring what many people are studying in closer alignment with what employers need for them to know—something policy alone has failed to do in Ireland and the United States alike. Irish students have been jolted by economic realities into science and technology majors; the proportion of university applicants who chose science, including computing, as their first choice rose 18 percent this year, and is up nearly 64 percent since 2008, while demand for construction-related subjects such as architecture has fallen and the humanities have declined.

That’s because, in spite of the nation’s high unemployment rate, there are shortages of chemists, biologists, medical scientists, nutritionists, laboratory technicians, software application developers, network and security experts, system administrators, IT project managers, and pharmaceutical, medical device, renewable energy, and production engineers, according to Forfás. “What’s not well understood is that while there’s an economic downturn in Ireland, there’s also an economic boom” in those fields, says Trinity’s Cahill.

But also, as in the United States, there’s worry about what Nolan called at his Maynooth inauguration too much of a focus on narrow job skills in immediate demand. He said students should be taught to reason, analyze, and argue.

There's concern, too, that, for all of its advantages, the Leaving Cert encourages the same kind of teaching to the test about which critics complain in U.S. states with high-stakes assessment programs. (Eighty percent of Irish students also admit they pick what they consider "easy" Leaving-Certificate optional subjects in order to get the highest possible score, a study by the Economic and Social Research Institute found.) And even after the Leaving Certs, some 20,000 Irish secondary students who apply to universities are left out because there isn't room, and disappear into a void for which there isn't any tracking data.

Still, what the Leaving Cert requires students be taught is what they need to know for college, and what U.S. students often don't. "Readiness is our problem. That's our challenge in the United States," says Spence. "Our high-school graduates are not ready. They're not doing the reading, writing, math that would ensure success." The Learning Cert, he says, "apparently is rigorous enough that the students have the right level of reading and writing skills on the one hand and math skills on the other. It's a very different challenge that we're facing."

The Irish get that, too. In spite of unprecedented problems in their higher-education system, they uncharacteristically see the glass, in this case, as half full.

"Education is seen as art of the solution now, including higher education," says Purser, of the Irish Universities Association. "So that's good. Even though the finances are bad."

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