



Technology and universities

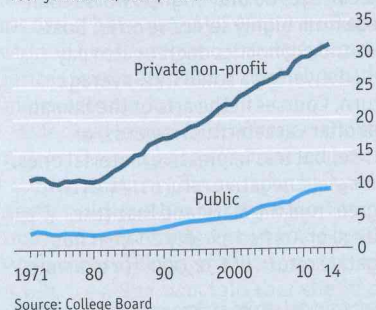
The log-on degree

PHOENIX

College in America is ruinously expensive. Some digital cures are emerging

WILLIAM BOWEN, a former president of Princeton, calls it “Harvard envy”. Other American universities try to emulate the Ivy League, which raises costs. They erect sumptuous buildings, lure star professors with fat salaries and hire armies of administrators. In 1976 there were only half as many college bureaucrats as academic staff; now the ratio is almost one to one. No wonder average annual fees at private universities have soared to \$31,000 in 2014, a rise of around 200% since the early 1970s (see chart). Each new graduate in America is now about \$40,000 in debt. People who take costly arts degrees may end up poorer than if they had never been to college (see box on next page).

Academic life isn't cheap

Average annual university fees
Four-year course, 2014 prices, \$'000

Digital technology can make college cheaper without making it worse, says Michael Crow, the president of Arizona State University (ASU) in Phoenix and co-author of “Designing the New American University”. This idea is not new. For a few years now, massive open online courses (“MOOCs”) have enabled universities to beam lectures to wide audiences for a tiny marginal cost. The problem has always been that taking a MOOC is not the same as attending college in person. MOOCs are cheap, but students cannot bump into each other in the library and swap ideas, chit-chat or body fluids.

ASU seeks to mix online and face-to-face instruction in a way that makes both more effective. For example, one reason why college costs so much is that many students fail to graduate on time. Only three-fifths finish a four-year degree within six years. This may be because they are ill-prepared when they arrive: shaky numeracy leads many to drop out of courses that require maths. ASU uses technology to diagnose and address such shortcomings. All students are tested on arrival and given remedial help if they need it.

Teachers cannot keep an eye on all their charges, so the university’s “eAdvisor system” nags them instead. Since 2008 it has given all freshmen an online achievement plan, including a constantly updated dashboard that shows whether they are on

Also in this section

48 New York’s best schools

48 What a degree is worth

49 Policing and Ferguson

50 Republicans write to Iran

50 Why bankruptcy rules are too tough

51 Houston copes with cheap oil

52 Lexington: The Richard Scarry rule of politics

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track or drifting towards the exit.

Online introductory courses, full of prompts and explanations, ensure that teachers do not have to keep going over the basics in seminars. This frees time to teach the more difficult stuff. Data analytics allow tutors to identify which students are stuck and arrange the right response.

Early results look good: ASU has almost doubled undergraduate enrolments since 2002, to 82,000, kept its degree costs reasonably low (\$10,000 a year for in-state applicants) and increased the share of students who graduate after four years from under one-third to half. The goal is to raise that to two-thirds in this academic year.

As well as chivvying laggards, software can make courses more fun. One of the most popular at ASU, on space exploration, offers nifty interactive sessions, allowing students to learn astronomy by way of a quest to find out what a habitable extra-terrestrial world might be like.

Providing more of its coursework online also helps a university to serve students far away. Phil Regier, the dean of online studies at ASU, says that the number of students who study remotely is growing fast. They tend to be older, holding down jobs, bringing up families and fitting in their studies whenever they can grab time in front of a screen. They pay the same fees as in-state students who live on campus.

This works out well for the university, which can educate more fee-paying students without building bigger lecture halls. Extra sources of income are handy at a time when the state of Arizona is cutting funding for higher education. Mr Crow is quick to spot opportunities: ASU has linked up with Starbucks, a coffee chain, to provide online degrees for company staff.

The notion that online degrees are inferior is starting to fade. Top-notch universi- ▶▶