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Editorial ENGINEERING

Examining the various news items coming in on engineering student enrolments—and for that matter university enrolments in general—a bewildering scenario can be observed. On the one hand engineering schools are closing down due to low enrolments and high costs in the USA, on the other hand engineering school enrolments are booming elsewhere. There is an intricate interplay between supply, demand and costs, which seemingly has no pattern. It is clear, though, that demographic forecasts on student numbers tend to be out of step with approaching realities. Outside the USA, Europe is now approaching an average of over 50% of the young adult population with university-entry qualifications—a jump of ten-fold in 20 years. On the other hand many countries experienced a birth-rate decline in the 1960s. Although it was projected that we would by now be feeling the pinch of a reduced demand in higher education, demographers apparently ignored the increased qualification trend, which has more than offset the fall in birth rates. The idea of mass universities and higher education for all is squeezing budgets. Moreover engineering education costs have mushroomed, and the costs per student are getting out of control. Also, just as presently there is an outcry to adapt higher education to the increased demands by pouring in money, the topsy-turvy results may again be contrary to expectations. We may experience a limit to demand and growth now that we want to adapt to the student explosion.

But demand, supply and budgets may not be the only factors controlling the enthusiasm for university education. Student education has not changed in approach very much in the past 100 years. With new methods of educational technology, closer controls of student performance may not encourage increased enrolment. Moreover with smaller margins in earning power between, say, engineers and highly qualified non-university professionals, a new delimitation between the professions may evolve. The large percentage of dropouts at universities in continental Europe is triggering certain developments in such directions. An interesting news item from Spain in our new 'Engineering Education World' feature shows a possible new approach, namely to encourage candidates who dropout to go for a 'lower' degree. A more differentiated system with equal chances for everyone could be one answer. This is exactly what administrators and planners of higher education generally do not do. As they are entombed in their own traditional environment they cannot see beyond their walls. In order to develop a more global approach, a new look at the structure of higher engineering education and its relation to professional qualifications may be necessary.

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