

Developments in Geomatics Education

Many institutes for geo(infor)matics education experienced hard times around the turn of the millennium. In particular, the influx of new students was often dramatically low and some university boards decided to erase land surveying and geodesy from their list of educational programmes. How do things stand now? Many new programmes have been set up in recent years. For example, a new bachelor degree programme in Geodesy and Geoinformatics began at the University of Zagreb, Croatia in academic year 2005/2006, while the master's programme is to get underway in 2008/09. Since 2005/06 Delft University of Technology has been offering a two-year programme towards a MSc in Geomatics. The series on Developments in Geomatics Education published in these pages between March and August this year demonstrates that even today, notwithstanding the many new curricula, student influx remains low and often insufficient to feed the need for professionals.

Penalty

This threat is a two-headed dragon. The first facing universities, where boards will not be inclined to support and retain programmes that year after year confront them with severe financial loss. The second head faces the side of the professionals: too few students today will result in the longer term in shrinking numbers of professionals, so that skilled, experienced and knowledgeable people will become a rarity. The upshot will be significant stress on land-survey standards, for firms will appear in the marketplace forced to employ unskilled people. While, as Professor Molenaar observed in February 2005 in this magazine, "client organisations no longer have sufficient capacity to formulate the specifications for the mapping projects they want to outsource, or the capacity to check the products of the mapping companies." The nature of geo-information means that damage originating in substandard products may not be immediately recognisable, so that future generations have to pay the penalty for mistakes made today. But what should perhaps worry us most of all is that low influx and deterioration at the basis of the profession constitutes a self-perpetuating mechanism.

Stepchild

It is not only that shortage of human resources could lead to geo-information being produced at substandard level, education itself may be affected. And this stems indirectly from reward systems at universities that continue to emphasise research, demoting teaching to the status of stepchild. "In many universities comparative research performance is the single greatest measure of prestige," observes John Hannah in his excellent analysis of the Australasian situation in GIM April 2007. He also notes a gap between the salaries of faculty staff and professionals in the industry "creating real difficulties in finding academic staff with the requisite teaching, research and professional skills." Hannah rings the alarm bell at the perception of an ever-expanding gulf opening up between demand and availability of surveying professionals in Australasia. And, forced to watch the crisis unfold with hands tied behind his back, he painstakingly analyses the possible reasons, one being the inability of universities to attract young people.

Name Change

From a business-administration point of view, many see a university as a vendor of skills and knowledge. Once this paradigm is accepted education can be managed and marketed like any other commodity. And one basic of economic law is the stated paramount importance of return on investment. The standard management response to figures written in red is cost cutting, at universities to be interpreted as reducing the number of teachers. In practice this means faculty staff having to shift their attention from education to research. Another standard marketing response is to increase sales by campaigning. And indeed, most universities now adopt a strong marketing policy in the hope of strengthening student numbers. For example in the GIMA blended learning programme discussed by Geertman in our May issue, "a substantial increase in student numbers, now stabilised at about twenty per year, is required to make the programme profitable, so that promotional activities are continually undertaken." However, even given extensive marketing and part-time marketing personnel the boost in student numbers is often meagre. In the July issue Trinder sceptically observes that in Australia a wide variety of "publicity activities have been undertaken for at least ten years by most institutions without significant improvement in enrolment numbers." And since "geodesy" is a term almost unknown to the general public, lethal in a world in which image is all, often, in terms of survival and success, even more than the object itself, name change is the new panacea for our troubles. But what on earth is in a name? "Change of departmental name," Trinder writes disappointedly, "too has failed to produce any significant shift in the popularity of the profession as a career choice."

Keep on Turning

According to Hannah, good marketing is essential. The experiences gained in New Zealand demonstrate that such a concept should include at least the following:

- simple, consistent and clear message
- high-quality oral, written and electronic communication material
- targeted audience, for example approaches to high-school career advisors and mathematics/geography teachers
- familiarity with category of students attracted to programme, e.g. rather rural boys than city girls
- continuity of publicity effort.

The deathblow for marketing is for it to follow the "pig cycle", but that is exactly what often happens. When the going is tough, time and funds become available, as soon as the sky clears help evaporates and the wheels of the marketing machine grind to a halt. Stormy times

demand a huge injection of human and financial resources to get things moving again.

<https://www.gim-international.com/content/article/developments-in-geomatics-education>
