

# the curt brown chronicles



## What Should Be the Education of Surveyors and Cartographers?

Fifty years ago, Curt wrestled with the notion of land surveying education. At that time, land surveying was closely associated with civil engineering and survey education was treated accordingly. Given the rise of geomatics and GIS, today the same remains true. Land surveying education now appears subordinate to GIS training and I am sure Curt would agree; the problem remains.

—Michael J. Pallamary, PS

brief mention of recent developments in engineering education should be presented.

The “Goals of Engineering Education,” the preliminary report, was published a few months ago through the efforts of the American Society of Engineering Education. In this report, among other

Unlike doctors, by far the largest percentage of engineers are employees. Whether the employer will be willing to accept this concept remains to be seen.

Many educators believe that engineering and all related subjects to engineering should be based upon a foundation of fundamental

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Anyone can recommend and advise as to how things should be, especially if there are probably many correct answers. For years people have debated, “What is the best method of educating others?” Many say this, and many say that. From the results of tried methods, it can be concluded that there is no one best way. Five hunters taking different paths will flush out far more game than five hunters taking the same path. Lincoln got his education at home; others need to go to college.

Those engaged within the discipline of geometronics come from many paths. Dr. Rolland Hardy in his national report to F. I. G. (published in the ACSM journal, June 1965) points out that within the United States surveying area there are essentially two educational paths: (1) The engineering path. (2) The science path. To this, I would like to add the school of technology, which will be discussed later.

Because surveying was at one time most closely associated with engineering,

items, it was recommended that the first professional engineering degree be at the master’s level. Since the publication of that report, a constant argument on the pros and cons of this and that goal in engineering education has come forth; the very volume and volatility of the arguments prove that few, if any, can convince others what is the correct path for engineering education or even what are the correct aims.

The way-outers envision that ultimately, engineers should be like doctors, they should have four years’ training in fundamentals, three years training in engineering subjects and, I suppose, three years’ internship. And since those who are pushing the concept seem to be deans of important universities, they may have the power to put the wheels in motion.

The intermediate view expressed by the recent report on “Goals of Engineering Education,” that of a master’s degree being the first professional degree, is within striking distance, and I believe this will come about in the due course of time whether we like it or not. The American Society of Civil Engineers is strongly behind this move.

sciences, mathematics and humanities, and, as a result, the former teachings of the application of knowledge to devices is being set aside because of time limitations. In large universities, it is true that engineering has become more and more science and humanities oriented and less and less directed towards the application of sciences to industry.

Engineering colleges are resisting the tendency to offer numerous undergraduate engineering degree courses. Why should they offer sanitary, highway, hydraulic, structural and other options within civil engineering? Why not have everyone take the same fundamentals and then specialize at the master’s level? Why offer a baccalaureate degree in surveying and mapping? Why not an M.S. as thirteen universities are now doing? Thus, specialization is moving to the graduate level. ■

Author **Michael Pallamary** has compiled the writings and lectures of the late Curt M. Brown. These works are published in *The Curt Brown Chronicles*.