

Vocational Training and University Education - Is There a Difference?

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1. Some preliminary observations

Vocational training in statistics, taken broadly to mean statistical courses aimed at professional staff rather than at university students, comes in a number of forms. Their levels range from virtually no prior knowledge in statistics to one or more years of university statistics. The organisational form differs from ad hoc courses within a firm to recurrent courses offered by, for example, a university.

In this article, the specific form of vocational training under consideration is the training provided by a government statistical office for its own staff and for users of statistics. The illustrations are based on experience from Statistics Sweden.

It appears that university education is often used as some kind of model for training courses in statistics. The reason may be that teachers at vocational courses have experience of university education, either as university teachers or as students. They may thus feel that there is no real alternative to copying university courses as closely as possible.

However, the basic situations at a university department and a centre for vocational training are quite different. A vocational teacher who does not take these differences into account when planning and executing his course will not do a good job.

(i) *A difference in goals:* If we first examine the differences in goals, we find that the university course has perforce a relatively vague goal. The reason for this is obviously that the student may elect to finish his studies after the course, or continue at a higher level. A university course at the lower levels thus has to provide both a self-contained body of statistical knowledge and a sound basis for further studies.

As a consequence, university courses tend to form rather solid pyramids. At the lowest level, a broad spectrum of statistical topics is covered in an elementary way. At the next level, some topics like descriptive statistics are more or less left out, while

