

The Research of Work-Related Learning for the Improvement of Practice; An Overview and a New Direction

Douglas McCulloch (Chairman, ASET Practice and Research Group)

We start with a description of placement (specific to UK Higher education), and go on to consider how research may inform practice most effectively. An examination of the scientific approach, and the use of statistics to inform medical practice, leads to an overview of placement research.

A Definition of “Placement”

1. The design of placement activities, and their definition in degree proposals, course documents, and university regulations
2. The preparation of students for the placement workplace
3. The arrangement of placements, and their management when in progress
4. The assessment of placement performance.

It seems unlikely that the phenomena involved could be extensively analysed using statistics; values and cultural factors are important determinants of practice. The terms “practice” and “improvement” can only be defined with a precision sufficient to allow analysis by focussing on a specific culture within which particular value judgements and performance criteria can be identified.

Informing Practice: the Scientific Approach

The sciences inform practice through the establishment of cause and effect relationships using statistical analysis. In medicine, the science closest to education,

the identification of cause and effect is often obtained using the randomised controlled trial (RCT) approach. The difficulty is that the control necessary to obtain the similarity of the two compared groups often requires the creation of groups which do not adequately represent the population as a whole [see Gunnell and Smith (1994) for a detailed example, and McCulloch (2003) for more exposition].

It follows that the judgements of physicians, based on RCT evidence, have to take into account the unrepresentative character of trial cases, as well as the impact of technical change on procedure success since the completion of the trial, and any other relevant variables. The fact is that even in medicine there is no certainty of cause and effect; physicians are able to make reliable judgements because there is scientific knowledge about the disease in question. Without that knowledge, valid judgements could not be made.

Informing practice through “hard” science is more difficult when the degree of variation in the population is large, so that a large sample size is needed to achieve statistical significance. This applies particularly to patients with Alzheimer’s Disease (AD); care takes place in a large variety of contexts, from nursing homes to extended families, and these contexts, as well as the presence of other conditions and diseases, make it difficult to achieve scientific control, or to measure costs. Drummond et al (1991) found a 20 per cent difference in the average quality of life of carers between their experimental group, who received a Caregiver Support Programme, and their control group, supported by conventional community nursing care. A 20 percent improvement might sound like success, but the result was not statistically significant,

because the sample was too small. Until statistical significance is shown, there is no scientific proof, and no formal reason to change practice.

The degree of variation between AD patients is similar to the degree of variation often found between students in higher education. In analysing the cause and effect relationships between placement/non-placement and other variables, such as post-graduation income, or degree classification, it seems ill-advised to proceed as if all of these other things, which could affect outcomes, will remain unchanged. Statistical significance may be found if these other factors vary in the right directions; we cannot rely on statistically significant results when we know so little about different student contexts and how they affect learning. This is an important difference between education and medicine; judgements are hard to make, because our understanding of learning is meagre. Comparing like with like in education is difficult; it is not possible to repeat an experiment to confirm a result found elsewhere, and knowledge does not accumulate.

Informing Practice: A Cultural Approach

It appears that the contribution that statistics may make to the informing of placement practice is limited, because that practice is variable. In fact, all placement activities are part of a process of cultural change and development, in which students are selected, accepted, or rejected by different cultures on the basis of the values they make evident in the workplace. It follows that values matter and deserve study, as do the practices which are supposed to be based on them.

Studying placements and professions as if they were part of a cultural process might include the inter-university comparisons of placement programmes, the identification of profession value judgements, and their relationship with entrants' psychological profiles. It is at least likely that studying professions as cultures would include the exchange of very significant meanings between academics and members of the professions that placement students aim to enter.

There are obvious differences between placements in the different professional sectors, from engineering and construction management through to business, finance, and languages training. Only through the value analysis of specific sectors, each with its own well-defined particular values and practices, can we accumulate knowledge and improve placement practice. The professions need such discussions to maintain and improve the contribution they are making to society.

Conclusion

Scientific knowledge cannot accumulate without a knowledge base in which true propositions can be demonstrated. In placement research, the propositions must come from the cultures of the professions entered by students, and the analysis of the learning processes which define them. It is interesting to find the Accounting profession beginning this kind of work, and reporting it in a journal entitled "Accounting Education" [Byrne et al (2001), Duff (2004), English et al (2004)].

Placement is (or should be) the point of contact between professional practice and the critical faculties of the academy. By focussing on the culture and practice of student entry into specific professions, placement research will develop a healthy critique of

influential sectors of society, will increase the relevance of its own contribution, and will improve both the quality and quantity of employment in the United Kingdom.