Approaches to evaluation

There is no single approach to the evaluation of education for entrepreneurship programmes, and therefore no single model which can be applied in all situations. It is more appropriate to think of evaluation in terms of a range of options or tools which can be selected and used according to the measure or programme being assessed. Clearly, factors such as the level of resources, both financial and professional time, which can be allocated to the evaluation, and the timescale within which results are required, need to be taken into account in deciding on the most appropriate approach to the evaluation. However, the type of programme being evaluated (eg whether to encourage the development of entrepreneurial attitudes, or to provide specific 'training' in the skills needed for business start-up) will be crucial, as will its scope (is it local or national?), its method of delivery, and whether the programme is voluntary within an institution or compulsory (in which case, it may not be possible to identify a control group).

A broad distinction can be made between *quantitative and qualitative* evaluation.

Quantitative evaluation

Quantitative evaluation entails collecting data from large samples of respondents often through a post -programme or activity evaluation form, or a large-scale survey. For example, programme participants may be targeted, rather than those delivering the programme, whose numbers would be smaller – although for a national programme which was delivered in the education system, it may be appropriate to survey teachers to ascertain their views on the delivery of the programme. They may be used in conjunction with qualitative assessments of attitudinal or perception shifts in a mixed method approach.

Qualitative evaluation

Qualitative evaluation, and the methods associated with it, enables issues to be explored in greater depth by seeking to gain a better understanding of the perceptions and attitudes of programme participants' and/or those delivering the programme. In particular, it may be used to identify shifts over time in attitudes to entrepreneurship. It is also highly appropriate for process evaluation, through gaining the views of participants and deliverers on how the programme has been implemented, and how improvements can be made.

Mixed methods

Many of the larger-scale evaluations of education for entrepreneurship programmes adopt a mixed method approach, incorporating elements of both quantitative and qualitative evaluation. Thus, the former may focus on establishing the characteristics and post-programme destinations of participants, while the latter may concentrate on perceptions of the usefulness of various components of the programme.

Impact evaluations

A key element of evaluation approaches which intend to assess the impact of a particular programme is the *counterfactual.* This commonly involves the setting up of two groups from which to gather data – a ‘treatment’ group, composed of those participating in the education for entrepreneurship activity, and a ‘control’ group, composed of individuals with comparable characteristics, but who do not participate in the activity.

However, experiments of this type are difficult to carry out in practice, and assume a ‘common effect’ across the whole treatment or control group. Also, the effects may only apply within the particular setting (eg educational level, geographical area) of the programme being evaluated, so that it may not be possible to say what would happen when a programme is generalised in a different setting. It is therefore advisable to complement this approach with non-experimental methods.

Other variants of this approach may be applied. For example, ‘matching’ allocates each programme participant a comparable member of the control group of non-participants. This matching is usually made in terms of characteristics such as age, gender, socio-economic group, and level of qualifications achieved. For example, the evaluation of the Berger Entrepreneurship Programme at the University of Arizona (Ref 001), which surveyed a ‘treatment’ group of 460 entrepreneurship graduates (achieved sample of 105) and a control group of 2,024 non-entrepreneurship graduates (achieved sample of 406) controlled for year of birth, gender, ethnicity, high school graduation year, and educational and employment history.

A derivative of this approach is Propensity Score Matching (PSM), which uses a single measure (the propensity score) as an indicator of the likelihood of participation on the programme. There is therefore an assumption that the participants and their matched non-participants had an equal likelihood of embarking on the programme. This being the case, differences in attitudes, outcomes, activities etc can be attributed to the effects of the programme.

An approach which is favoured in a number of the more sophisticated evaluations of education for entrepreneurship programmes is that of difference-in-difference, whereby comparisons of the attitudes and experiences of the participant group and the non-participant control group are made both before and after the attitudes and experiences of the period of the programme. This enables a more robust measure of the impact of the programme to be derived. The study of the impact of entrepreneurship education on entrepreneurship competencies and intentions, conducted by the University of Amsterdam and the Tinbergen Institute in the Netherlands (Ref 004), adopted just such a framework. Outcome variables were measured before the start of the programme and at the end of the programme to produce “unbiased estimates of the program’s impact”.

Non-experimental methods can be powerful evaluation tools, particularly if the process underlying the outcome variables is well known, and data exist on the relevant measures. In such cases, matching offers a suitable method of evaluation. If it can be combined with a difference-in-difference approach, then certain unobserved measures can also be controlled for, which may improve the quality of the study.