This paper has been presented at the 1995 Entrepreneurship Research Conference, held at the London Business School, London (UK), April 9-13, 1995.

Overall Evaluation of Entrepreneurship Training Programs

by Jean-Pierre Béchard and Gilles Bourdeau

Working paper no 1995-04-01
April 1995
ISSN : 0840-853X
Abstract

The quantity and diversity of entrepreneurship training programs have not brought in a verdict on their effectiveness and quality. Using a theoretical framework drawn from the major contributions structuring the field of education, a group of researchers has conducted a qualitative and quantitative analysis of a Quebec-wide program of entrepreneurship training. Findings show that, of the four different approaches used in teaching this program, one stands out sharply in terms of its quality and effectiveness. From this standpoint, the present study identifies three levels of repercussions on how public policies may eventually be determined in the area of entrepreneurship training.
Overall Evaluation of Entrepreneurship Training Programs

Introduction

The September 1994 issue of Success lists the 25 best management schools for entrepreneurs. Though the report stresses the importance of turning out future university trained entrepreneurs, it also raises certain basic questions about entrepreneurship and education. What makes one entrepreneurship program better than another? What quantitative and qualitative criteria are used in measuring the quality and effectiveness of these programs? In our opinion, such questions call for some serious soul searching, and the sooner the better. In this article, we would like to join in this debate by widening its analytical perspective. The educational sciences constitute a body of knowledge whose object of study is the teaching learning process. Viewed from their vantage point, the debate branches off in a promising direction.

We should first define the unit of analysis used in our research. Three international organizations the International Network of Management Development (INTERMAN), the United Nations Development Program (UNAP), and the International Labour Organization (ILO) in Geneva have agreed on a common definition of an entrepreneurship training program. These three bodies recommend the designation "entrepreneurship development program" (EDP), meaning any set of structured courses which inform, train, and educate those interested in participating in socio economic development through projects aimed at business awareness, development, and creation or at the training of trainers (Interman 1992). This definition cuts across the American expression "entrepreneurship education program" and the European expression "small business education program." Armed with this clarification, we can now review what is known about evaluating EDPs.

Previous Research

Attentive analysis of the literature on entrepreneurship and education reveals a multitude of different EDP programs (Buzzard, 1984; Dana, 1992; Gillin, 1991; Harper, 1984; Interman, 1992; Loucks, 1988; NCRVE, 1984; Robinson, Christensen, 1992; Vesper, 1993; Wyckham, Wedley, 1989). But the number and diversity of these programs are no longer any guarantee of their success. Robinson, Haynes (1991) and Plaschka, Welsch (1990) point out that the quality and effectiveness of EDPs are still open to question, whether in terms of the resources they provide, the way their content is structured or their status in the curriculums of college and university management departments. The same concerns are echoed by Block, Stumpf (1992) who are launching a research program to study the wide range of experiences with entrepreneurship education in both the school and the community. They believe that there must be a move to evaluate EDPs.

A good number of researchers consider evaluation a key element in the future development of EDPs. We might thus expect to find a lot of evaluation research in the literature on EDPs. This is not the case. As early as the 1980s, the scarcity of studies measuring the impact of training on entrepreneurship was being noted (Dainow, 1986; Patel, 1985). Fortunately, some researchers expanded their work to include an evaluation component in programs of which they were also often the designers. We would like to survey this part of the literature with an eye on two specific points: research methodologies and the kinds of criteria used to evaluate EDPs.

Copyright © 1995 École des HEC
Methodologies of Evaluative Research

With regard to their design, these research studies may be grouped at four different levels of sophistication. The first level includes studies like those of Garnier, Gasse (1988), Garnier, Gasse, Raynal (1991), McMullan, Long, Graham (1985), McMullan, Long, Wilson (1985), Mescon (1987) and Wan (1989). These studies are characterized by samples drawn from participants in one or more training classes who are tested only once with a single instrument. In the second group we find Clark, Davis, Harnish (1984), Singh, Singh (1993), Vesper (1971, 1973). While also relying on a single measurement to sound out participants, these studies broaden their scope to include another group (professors, owners of small businesses, former participants in the program, a control group). The third group of studies uses a more sophisticated methodology, surveying the same group and/or control group with two or more instruments over time. We are here thinking of Allen (1992), Kirby, Mullen (1990), Price, Monroe (1993) and Sexton, Bowman Upton (1987, 1988). Finally, we group together Dainow (1988), Hills (1988), Loucks (1988), Patel (1992) and Wyckman (1989) because they all use several methods (analysis of documents, interviews, group encounters, field visits, and questionnaires) to investigate several different actors. All the actors are important in this kind of evaluative research: participants, professors, agents of socio economic organizations, managers, governments, etc

As first level studies cost less than fourth level ones, the former are understandably more numerous. But, when a well structured program has been in existence for a long time, we observe a tendency to abandon analytical evaluative research in favour of naturalistic and global approaches.

Nature of Evaluation Criteria

The criteria are grouped according to two points of view: the viewpoint of those taking the program and the viewpoint of those giving the program.

With regard to the viewpoint of those taking the program, studies look at how programs are rated and at what impact they are perceived to have on personal development. Other criteria measure the program's impact on business results or on the implementation of a specific project.

The viewpoint of those giving the program is of particular interest to politicians, program managers, evaluators: in sum, those who are involved in allocating resources. They want to guarantee the quality and effectiveness of the programs established. The aspects measured are objectives, content, profile of participants, performance of trainers, overall results, and, finally, the medium and long term future of the program.

Analysis of the literature on the subject indicates that the evaluation of EDPs typically takes a two pronged approach: qualitative and quantitative. Given the EDP's level of complexity, qualitative evaluation provides some understanding of the interactions between participants, trainers, and program content in a given context, whereas a quantitative approach will make it possible to estimate the program's short term results. Only such a two pronged evaluation can measure up to the difficulty of forming a sound opinion of the quality and effectiveness of entrepreneurship training. In our opinion, the Béchard Toulouse model (1995) has already made a step in that direction by proposing an analytical framework which draws on the major theories.
Overall Evaluation of Entrepreneurship Training Programs

structuring the field of education. We contend that this qualitative work should be completed by a quantitative component.

**Analytical Framework**

In 1992, the Quebec ministry of education (MEQ) designed the training program entitled "Launching a Business" and set it up in 16 school boards throughout Quebec.

This program includes 330 hours of coursework: 220 hours are devoted to the mastery of entrepreneurship skills and 110 hours to the acquisition of more general skills. The program is divided into 6 modules which last anywhere from 30 to 120 hours (multiples of 15). This includes the time required for evaluation and remedial teaching (DGFP 1992).

Following an agreement between the MEQ and HEC's Maclean Hunter Entrepreneurship Chair, we undertook a detailed analysis of the implementation of the above mentioned training program. The first phase of the analysis completed, it was possible to validate a quantitative evaluation framework which we here present in its broad outline.

In this first phase of the research, findings from the analysis of documents, questionnaires, and interviews with the coordinator teachers of each local program revealed eight distinct ways of teaching entrepreneurship. These distinct teaching practices find their explanation in eight educative orientations rooted in the major theories of education. An educative orientation is in fact the personal vision each trainer develops with regard to education, learning, and the content to be taught. We discovered the following educative orientations: conformist, internal and external adaptive, self training, self learning, transformative, convivial, and communal. We measured each of these educative orientations from three angles: socio organizational interactions (frequency and intensity of the school's relations with local partners); pedagogical interactions (frequency and intensity of the pedagogical models used by the trainers); and integration of knowledge (number of hours spent on teaching as compared to those spent on supervising individual projects).

Results from the foregoing measurements were combined to form four mutually exclusive types which were then validated by contemporary program theories (Hameyer, 1991). Table 1 presents a synthesis of the Béchard Toulouse analytical framework (1995). We identify four types of entrepreneurship development programs: institutional, reticular, didactic, and regionalist.

Among the 16 sites offering the "Launching a Business" program, we find 3 school boards (ALPHA, BETA, GAMMA) under the institutional type. This type is rooted in two educative orientations (conformist, internal adaptive). In sum, these three school boards maintain average interactions with their milieu, also allow average interactions between trainers and their students, and, finally, ensure average integration of knowledge into the student's project.

The reticular type cuts across two educative orientations (external adaptive and self training). We find five school boards under this type (DELTA, ZETA, EPSILON, ETA, THETA). Characteristics displayed are: high level of interaction with the milieu, weak teacher student interactions, and average integration of knowledge into the student's project.
Four other school boards form the didactic type (IOTA, KAPPA, LAMBDA, MU). Essentially, this type falls into the orbit of two educative orientations: self learning and transformative. It displays weak school milieu interactions, high teacher-student interactions, and average integration of knowledge into the student's project.

Finally, the regionalist type comprises two educative orientations: convivial and communal. As observed and measured in four school boards (NU, XI, RHO, PI) these educative practices are characterized by: average school milieu interactions; high teacher/student interactions; and high integration of knowledge into each business project.

In light of the Béchard Toulouse analytical framework (1995), a crucial question must be asked. Is there one of the four types of EDP programs which is so superior in quality and/or effectiveness that it should be recommended for adoption in socio economic policies? The rest of this article attempts to answer this question.
## Table 1

*Four types of entrepreneurship development programs (Béchard, Toulouse, 1995)*

<table>
<thead>
<tr>
<th>INSTITUTIONAL TYPE</th>
<th>RETICULAR TYPE</th>
<th>DIDACTIC TYPE</th>
<th>REGIONALIST TYPE</th>
</tr>
</thead>
</table>
| **Theoretical foundations** | - conformist orientation  
- internal adaptive orientation  
- external adaptive orientation  
- self-training orientation  
- self-learning orientation  
- transformative orientation | - high socio-organisational interactions  
- weak pedagogical interactions  
- average integration of knowledge | - convivial orientation  
- communal orientation |
| **Measurements** | - average socio-organisational interactions  
- average pedagogical interactions  
- average integration of knowledge | - high socio-organisational interactions  
- weak pedagogical interactions  
- average integration of knowledge | - average socio-organisational interactions  
- high pedagogical interactions  
- high integration of knowledge |
| **School boards** | ALPHA, BETA, GAMMA  
DELTA, ZETA, EPSILON, ETA, THETA | IOTA, LAMBDA, KAPPA, MU | NU, RHO, XI, P |

*Copyright © 1995 École des HEC*
**Presentation of Findings**

Researchs on the quantitative evaluation of programs suggest that components should be measured at three stages: upon entry into the program (input), during the training process (process), and finally at the end of training (output). Presented below in table 2 are the measurement indicators constructed for each of these stages.

**Table 2**

<table>
<thead>
<tr>
<th>Input</th>
<th>Process</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rates</td>
<td>Registration rate</td>
<td>Graduation rate</td>
</tr>
<tr>
<td>Measurements</td>
<td>Number of places available</td>
<td>Number of graduates</td>
</tr>
<tr>
<td></td>
<td>Number of registrations</td>
<td>Number of places available</td>
</tr>
</tbody>
</table>

The multiplication of these three rates gives a measurement of the program's short term (6 months) effectiveness.

\[
\text{Short term effectiveness} = \frac{\text{Number of businesses created after 6 months}}{\text{Number of registrations}}
\]

After 6 months, we think it would be difficult to measure the effectiveness of a program. The impact of training would be diluted by the entrepreneur's other learning initiatives. In table 3 we find all the quantitative evaluation measurements for the 16 school boards which offered the "Launching a Business" program.

**Interpretation of Findings**

Figures 1, 2, 3 and 4 show the rates for registration, graduation, business creation (after 6 months) and the short term effectiveness of the four types of EDPs and give rise to the following interpretations.

The institutional type is characterized by a low registration rate, a rather high graduation rate, a weak business creation rate and, finally, a weak short term effectiveness rate. With its conformist and internal adaptive orientations, this type stresses the transmission of knowledge by the professor and the reproduction of this knowledge by students. The relatively high graduation rate betrays this preference for content. And it should also be noted that this type does not favour the program's openness to the milieu.
### Table 3
Quantitative evaluation of "Launching a business" in 16 school boards

<table>
<thead>
<tr>
<th>INSTITUTIONAL TYPE</th>
<th>RETICULAR TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ANSAT</td>
</tr>
<tr>
<td>Registration rate</td>
<td>32/28 = 1.14</td>
</tr>
<tr>
<td>Graduation rate</td>
<td>14/32 = .44</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIDACTIC TYPE</th>
<th>REGIONALIST TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>IOTA</td>
<td>KAPPA</td>
</tr>
<tr>
<td>Registration rate</td>
<td>16/17 = .94</td>
</tr>
<tr>
<td>Rate of business creation after 6 months</td>
<td>7/12 = .58</td>
</tr>
</tbody>
</table>

Copyright © 1995 École des HEC
Overall Evaluation of Entrepreneurship Training Programs

Copyright © 1995 École des HEC
The reticular type shows a high registration rate, a low graduation rate, an average business creation rate, and an average short term effectiveness rate. As this type is founded on external adaptive and self training theories, it comes as no surprise to see a very high registration rate. This implies a high degree of openness to the milieu and a preference for the development and use of school and community networks.

Next in line is the didactic type which is defined by average rates of registration, graduation, business creation, and short term effectiveness. Built on self learning and transformative theoretical orientations, the didactic type stresses balanced relations between the trainer and the student and an equitable share of time devoted to teaching and supervision. This type thus puts a premium on integrating content into the student's project and on seeking equality in the pedagogical relationship.

Finally, the regionalist type presents an average rate of registration and high rates of graduation, business creation, and short term effectiveness. Grounded on convivial and communal orientations, the regionalist type is something of a synthesis of the three other types. Integration of knowledge into the student's project, a pedagogical relationship which favours both teaching and supervision, and openness to the milieu are all stressed. This combination of strengths explains this type's high short term effectiveness. Figure 5 outlines the four types of EDPs and presents their respective strengths.

The analysis and interpretation of these results can be pushed to a second level of reflection. Figure 6 in fact presents interesting findings on the rate of short term effectiveness obtained by each school board. For each of the types, we note that there are school boards with high and low rates. This leads us to think that, by adapting to specific contexts, each type can produce programs that work at the local level. It is only when findings are combined according to the Béchard Toulouse (1995) model that short term effectiveness is not the same for each type. The regionalist type chalks up a 44% rate of short term effectiveness. The didactic type posts a short term effectiveness rate of 33%, whereas the reticular and institutional types achieve, respectively, 30% and 25%. These observations lead us to reflect on the possible implications of this research for decision makers.
FIGURE 5
Illustration of the 4 types of EDPs

<table>
<thead>
<tr>
<th>Institutional type</th>
<th>Didactic type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contents</td>
<td>Contents and pedagogical interactions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reticular type</th>
<th>Regionalist type</th>
</tr>
</thead>
<tbody>
<tr>
<td>School and community networks</td>
<td>The overall system</td>
</tr>
</tbody>
</table>
Figure 6: Short term effectiveness of the 16 EDPs.
Implications for Decision makers

The results of this exploratory research suggest three levels of intervention: socioeconomic, psycho cultural, and pedagogical.

First of all, it appears that regionalist type programs are more effective than the others in the short term. Qualitative evaluation ascribes the following characteristics to the regionalist type: average interactions between the school and its milieu; high teacher student pedagogical interactions; and a high integration of knowledge into the student's project. Quantitatively, the regionalist type posts an average registration rate, a high graduation rate, a high business creation rate, and a high short term effectiveness rate. In light of this overall evaluation, we recommend that EDPs be designed according to the regionalist type. This implies giving precedence to the frequency and intensity of the school's contact with its milieu during the conception, implementation, and evaluation of the program. With regard to pedagogical interactions, the emphasis must be on the diversity of teaching/learning practices. The greater the variety of approaches used, the greater the likelihood a larger range of needs will be met. As concerns the integration of knowledge, programs must be structured so that the hours spent on supervision equal or even surpass the hours spent on teaching, so as to ensure the transfer of knowledge within each business project.

At the psycho cultural level, findings point to a certain diversity within each type of EDP. Each type seems to have its own theoretical orientations, its own strengths and weaknesses. The most effective EDPs are those which most faithfully reflect trainers' concrete practices while also responding to the needs of a specific local clientele. The question here is one of coherence. Yet there is also a serious risk of isolation when the program is structured around a small knot of people. Should a key person leave, the program's medium term results may suffer. Spreading the risk over a larger internal and external team will ensure greater consistency in the quality of teaching students receive. The operative concept here is the experience curve.

The third level of intervention, that of pedagogy, draws attention to the establishment of a program for forming trainers. This program must be compatible with the framework program. The elements for discussion are the following: (1) content; (2) teaching methods; (3) school and community networks; and (4) reflection on the educative orientations of each trainer (conception of the school in its milieu, conception of trainer student relationship, and conception of content).

In our opinion, the program for training trainers serves to link the psycho cultural level (current concrete practices) to the socio economic level (desired future practices).
References


Direction générale de la formation professionnelle (DGFP), Administration, Commerce et Secrétariat (1992) Ministère de l'éducation du Québec (Canada), Programme d'études "Launching a business" CZW-010, 44 pages.


Copyright © 1995 École des HEC


Copyright © 1995 École des HEC
Overall Evaluation of Entrepreneurship Training Programs


