ACE Research Vignette #044: Can entrepreneurship be taught (II)? Further Evidence

This series of research vignettes is aimed at sharing current and interesting research findings from our team of international entrepreneurship researchers. This vignette, written by Professor Per Davidsson, examines new evidence on whether entrepreneurship education and training leads to more entrepreneurial action and success.

Background and Research Question

Can entrepreneurship be taught? Do courses and programs designed to foster entrepreneurial skills, action and success have the intended effects?

By and large, research does not support the folklore notion that “entrepreneurs are born, not made”. But does this mean that entrepreneurship can be taught and learned through training courses and educational programs? We addressed this question in an earlier ACE Research Vignette (029; see also 039). In the current vignette, we review additional, recent evidence from high quality and large scale studies. It is an important question, because even if some people have their doubts about its efficacy, the fact is that entrepreneurship education and training has grown massively over the last few decades. This means that very significant public and private funds are spent on such activities, which makes their effectiveness a very important question to investigate.

How was this investigated?

We report findings from three studies. The first is a so-called “meta-analysis” by Bae and colleagues. Meta-analysis is a technique for statistically aggregating findings across all available research studies. Bae’s study extends the meta-analysis by Martin and colleagues that was reported in ACE Vignette 029. A total of 74 studies in a broad range of countries and with a combined sample size of almost 40,000 individuals underlie their results.

With the second study we return to Fairlie and colleagues’ analyses of the results of a large scale, real-world experiment conducted in the USA, the GATE (Growing America Through Entrepreneurship) program. Over 4,000 individuals showing an interest in starting a business or growing an existing one were randomly assigned to either participate or not in the training through a lottery procedure with a 50/50 chance of enrolment. Outcomes were followed up for 60 months. This makes it possible to credibly isolate the effects of the training, and to see whether the effects last over time. Initial findings from GATE were reported in ACE vignette 029; we now relay results from a new report from the project.

The third study by Elert and co-workers focuses on the subsequent entrepreneurial activities of close to 10,000 participants in a high school entrepreneurship training program, the Junior Achievement Company Program (JACP), in Sweden. The program applied a mentored “learning by doing” approach where students start actual, albeit temporary, ventures. Entrepreneurial activities and outcomes were followed up between 11 to 16 years after graduation. For comparison the authors used a carefully matched sample of similar individuals, who had not participated in JACP.
Findings

The meta-analysis by Bae and colleagues found a small but statistically significant association between entrepreneurship education and intentions to start a business in the future (r=+0.14; where +1.00 denotes a “perfect” positive relationship). This is a stronger association than that between general business education and entrepreneurial intention. However, most of the effect disappears when the researchers control for the level of entrepreneurial intention the students already had prior to the education. Does this prove that entrepreneurship education does not work? Not necessarily. The proper role of entrepreneurship training is not to pep-talk people into starting businesses, but to help them make better decisions in that regard, and to perform better if they choose to do so. If some students start the training with high intentions based on a naive view of what entrepreneurship entails and their own suitability for it, it may be a good thing if the training sometimes reduces their eager to start a business. Martin’s meta-analysis (reported in ACE vignette 029) found statistically reliable effects of entrepreneurship education on unambiguously desirable outcomes like entrepreneurship-relevant knowledge and skills as well as on financial success among those who did start firms.

Fairlie’s new analyses of the GATE experiment focus on the propensity to grow from self-employment to taking on employees. The results show that the effects of entrepreneurship training on hiring the first employee by 6, 18 and 60 months are consistently positive. At the last follow up, 21.5 percent of the participants had employees, compared to 17.3 percent of the non-participants. However, these differences are not “statistically significant” at the conventional 5 percent risk level. That is, while the differences are suggestive the researchers cannot with satisfactory statistical certainty rule out the possibility that some factor other than the training has caused them to occur.

Elert’s study showed that JACP participation had a positive effect, which is as high as 30%, on the long-term probability of starting a firm. Further, JACP alumni who started their own firm on average report 10% higher income than matched business founders who did not participate in the training. These are remarkably strong, long term effects. However, there was no effect on the survival of the businesses, which the authors interpret as showing that “firm survival is not an appropriate proxy for entrepreneurial performance, especially for individuals with significant opportunity costs.”

Business and Policy Advice

Although not all entrepreneurship education is effective, and no entrepreneurship training can turn anyone into the next Steve Jobs, the overall results are encouraging and suggestive. Bae’s study could not establish any differences in the efficacy of different (coarsely defined) teaching approaches (semester vs. workshop format, and venture creation vs. business planning focus). However, it is suggestive that the rather marked, positive effects in Elert’s study emerged from a mentored “learning by doing” program at early age. On the other hand, Martin’s meta-analysis (reported in ACE vignette 029) found stronger, positive effects from academic programs compared to other entrepreneurship training. This indicates that both hands-on “doing” experience and conceptual reflection may be critical to the success of entrepreneurship education programs.