

## Executive summary

In this report we present the results of our assessment studies which focus on the effects of different educational approaches, that is education *about*, *through* and *for* entrepreneurship at secondary and tertiary level of education. The analyses are based on longitudinal data that we have been collecting since 2011. In addition to these analyses the report includes three chapters by external researchers who have performed analyses on related issues. The main findings in this report are the following:

- 1) Education *about*, *through* and *for* entrepreneurship has very different effects
- 2) The way in which the educational approaches are taught and the teaching style which the teacher uses are both very important factors
- 3) Educational interventions in entrepreneurship at an early educational level influence the pupils more than if these interventions come at later educational levels
- 4) Parents' influence on their children's entrepreneurial attitudes are determined to a larger extent by social factors (nurture) than by biological factors (nature)
- 5) Entrepreneurship has become a youth phenomenon

The Global Entrepreneurship Monitor (GEM) study, which has been performed in collaboration with Thomas Schøtt from SDU, demonstrates the last point and shows that entrepreneurship seems to have become a youth phenomenon. When comparing the results of the GEM study performed in 2010 with the GEM study performed in 2014, it is clear that the interest in entrepreneurship has increased among individuals in the age group 15-34, whereas it has decreased among individuals in the age group 35-64. The analysis furthermore shows that entrepreneurship education has a positive association with individuals' entrepreneurial self-efficacy, that is, their confidence in performing entrepreneurial activities.

This finding is further strengthened by the findings presented by Henrik Barslund Fosse from the Danish Agency for Science, Technology and Innovation in his analysis of how start-up activities among

university graduates have developed since the start of the millennium. The analysis shows that the entrepreneurial activity among graduates has increased with 43 percent, and that this significant rise is mainly explained by graduates from master-level programmes whose entrepreneurial activity has increased with 159 percent. Furthermore Barslund Fosse's analysis shows that graduates who start a business have a significantly higher growth in productivity, which demonstrates the high competitive capacity of their businesses.

Anders Hoffman from the Danish Business Authority and Martin Junge from DEA have performed an analysis about the influence that parents have on their children when it comes to self-employment. This analysis shows that the trans-generational effect is explained by social factors (nurture) rather than by biological ones (nature). Parents' attitudes and motivation as well as whether they work as entrepreneurs have an impact on children's attitudes and motivation and later work as entrepreneurs, but it is especially the self-employment of parents that has an effect. And Hoffman and Junge's results point toward the importance of identification with role models, because as their analysis shows, the influence of parents is to a large extent decided by whether or not they have the same sex as their children.

In our longitudinal studies at tertiary level, where we investigated which dimensions are important in education *for* entrepreneurship, we show that student ownership over entrepreneurial projects and inclusion of students' prior contextual knowledge in the educational process are crucial dimensions that decide whether or not the educational interventions have a positive influence on students' levels of entrepreneurial self-efficacy and entrepreneurial activities.

At secondary level of education we have investigated how education *about* and education *through* entrepreneurship are associated with pupils' level of school engagement and entrepreneurial intentions, which roles educators play in this process, as well as to what extent these associations remain over time. In addition, we analyse how a change in these educational approaches affects the pupils' educational motivation, self-esteem, relationship to classmates and teachers, as well as how

education *for* entrepreneurship affects these variables at different educational levels. The analyses show that education *about* and education *through* entrepreneurship have very different effects; the former - which mainly focuses on fostering cognitively-oriented entrepreneurial skills - has a positive association with the pupils' level of entrepreneurial intentions but a negative association with their level of school engagement, whereas the opposite is the case for the latter which has a stronger focus on non-cognitive skills. However, the level of teacher support plays a crucial role here. The analyses furthermore show that both of these approaches seem to be most influential on younger pupils (9<sup>th</sup>-10<sup>th</sup> school year) compared to older pupils (11<sup>th</sup>-12<sup>th</sup> school year), and that the most effective approach seems to be education *for* entrepreneurship, where the focus is equally distributed on cognitively-oriented entrepreneurial skills, which we refer to as 'business-oriented entrepreneurial skills' in the report, and non-cognitive entrepreneurial skills, which we refer to as 'enterprising skills' in the report.