AFRICAN LEADERSHIP ACADEMY LEARNING
BRIEF: VERY YOUNG ENTREPRENEURS

Emergent thinking from the field of very young entrepreneurship education

JANUARY 2018
The Value of Early Entrepreneurship Intervention

How can we understand the effectiveness of early entrepreneurship interventions when it is so difficult to measure, and when these effects may only emerge with time? This is an especially challenging and pertinent question for programs that target the younger end of the spectrum of youth, particularly pre- and early-teens. Young people in this age range are in early stages of a life journey that can take many routes, so determining whether providing entrepreneurship experiences to this age group has a positive impact is challenging. Not only are their life paths unpredictable and career trajectories non-linear, external factors exert pressures that affect their choices and decisions. Such pressures may include requirements for parental consent, being taken seriously by business advisors, industry stakeholders and service providers, and legal issues, such as minimum age to set up a company or the process to access financial products and services.

There is a notable pivot when measuring outcomes of entrepreneurial interventions for youth from upper teenage years and beyond. When young people in the 19-25 age range are targeted (post-secondary transition, leaving higher education, or at the beginning of their career), results of entrepreneurial interventions are relatively easier to measure. Direct outcomes can potentially be seen within months or a year, for example, in terms of formally establishing a company, tracking investments, profits, and access to credit, and creating jobs.

Conversely, younger teenagers’ interest in entrepreneurship will likely only emerge on a longer-term basis, may manifest in part-time entrepreneurial endeavors alongside education or employment, or may never lead them to be classified as entrepreneurs. It is, therefore, important to try and understand how early exposure to entrepreneurship through education or other means affects individuals’ attitude and aptitude, both to enter the workforce and to set up their own enterprises.

Scientific research supports the theory that early entrepreneurship education is formative beyond the mere choice of a career: it is associated with increasing the chances of individuals pursuing further entrepreneurship training later in life, and with influencing their entrepreneurial intentions. Moreover, it seems that early entrepreneurship exposure can cultivate a lifelong entrepreneurial approach to work even if a career as an entrepreneur is not pursued. Experimental evidence has also begun to shed light on what kinds of entrepreneurial training might achieve this outcome. Entrepreneurial training might comprise acquisition of both cognitive (and hard) skills, such as accountancy and market analysis, and non-cognitive (or soft) skills, such as problem-solving and decision-making (see Table 1 below). The latter skills (often mistaken for fixed personality traits) have been shown to be valuable to younger students and are specifically useful to acquire early in life. These can be acquired through guided exposure to experiential work and team work geared at skill building. Interestingly, experimental research found that early acquisition of cognitive (or hard) skills, deriving from the technical knowledge underpinning business management, does not make a significant difference to entrepreneurial intentions.

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### Emerging Non Cognitive skill repertoire of a successful entrepreneur

<table>
<thead>
<tr>
<th>Skill</th>
<th>Description</th>
<th>Associated with</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creativity</td>
<td>A person’s ability to create new opportunities</td>
<td>Critical thinking and ability to envision possibilities</td>
</tr>
<tr>
<td>Emotional stability</td>
<td>A person’s locus of control and core self-evaluation</td>
<td>Ability to endure hardship</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>A person’s confidence to possess the ability to perform a task</td>
<td>Ability to think s/he can do</td>
</tr>
<tr>
<td>Exploratory perseverance</td>
<td>A person’s persistent and unwavering behavior in settings in which several alternatives can be explored and evaluated</td>
<td>Resilience</td>
</tr>
<tr>
<td>Perceived feasibility</td>
<td>A person’s perception of the degree to which starting a new business is a feasible option</td>
<td>Whether a person will (attempt to) become an entrepreneur</td>
</tr>
<tr>
<td>Personal initiative</td>
<td>A person’s willingness to take action proactively</td>
<td>Ability to act proactively</td>
</tr>
<tr>
<td>Responsibility</td>
<td>A person’s willingness to be accountable for her/his activities</td>
<td>Ethics and commitment to follow through</td>
</tr>
<tr>
<td>Risk taking</td>
<td>A person’s predisposition towards risky alternatives</td>
<td>Risk calculation</td>
</tr>
<tr>
<td>Social orientation</td>
<td>A person’s ability to make useful connections (network)</td>
<td>Ability to work with others</td>
</tr>
</tbody>
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A randomized field experiment was set up in the Netherlands to analyse the effectiveness of early entrepreneurship education on 11-12 year olds (final-grade primary school pupils) by measuring their skills development. They were randomly allocated to two groups: one received an entrepreneurship training program (consisting of both cognitive and non-cognitive skills) and the other did not. At the end of the training, the two groups did not differ in terms of cognitive entrepreneurial skills, yet they did in terms of non-cognitive skills. The pupils who were trained showed robust enhancement of all nine skills tested: self-efficacy, need for achievement, risk taking, social orientation, persistence, motivating, analysing, proactivity, and creativity. This experiment suggests that skills underlying an entrepreneurial mindset can be acquired and taught, through experiential learning, from as early as 11 years of age.

Non-cognitive skills may affect accumulation of cognitive skills later in life, as emphasized in a model of skill formation created by Cunha and Heckman (2007). Non-cognitive and cognitive skills are developed during different stages in life, where the skills learned during one period in life (for example, at primary school) augment benefits of investments in these competencies in subsequent periods (for example, at high school or university). Because of these cross-productivity effects, early investments in skills building may be particularly effective in the long run.

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3 Skill list compiled from the sources cited in this Learning Brief.
Moreover, two additional studies showed that having had prior contact to entrepreneurship education positively correlated with students’ attitudes toward entrepreneurship and intention to choose it as their future profession. Studies have confirmed that entrepreneurial intentions are strongly associated with an individual’s perceptions towards entrepreneurship and its feasibility. These seem to be conditioned by early competence and familiarity with entrepreneurship, suggesting that early exposure to appropriate training may be crucial in developing entrepreneurs.

Some studies have looked more closely at how exposure to early entrepreneurship education can be associated with the development of specific non-cognitive skills, and which skills can influence the most entrepreneurial intentions or be the most crucial to develop for successful entrepreneurship. First, perceived feasibility, the perception that entrepreneurship is a viable option (or that a project is worth pursuing) was demonstrated to be enhanced by prior exposure to entrepreneurship. Second, development of perceived behavioral control (or entrepreneurial self-efficacy) emerged as a key factor that affects formation of an individual’s entrepreneurial intention. Third, one study indicated that more entrepreneurially-experienced individuals display greater exploratory perseverance than those with little to no entrepreneurial experience. Exploratory perseverance is a relatively new construct that captures the tendency to keep exploring broader sets of alternatives, to adopt a parallel rather than sequential approach to trial-and-error learning, and, after negative experiences with some alternatives, to be more inclined to give them a second chance.

Exploratory perseverance, together with perceived feasibility and behavioral control, can be acquired through entrepreneurial training. It appears that a cohort of teenagers equipped with skills such as these could be seen to occupy the opposite side of the spectrum from teenagers not in education, employment, or training.

Other studies explored whether early entrepreneurship education may also contribute to reducing gender differences, working as an equalizer for skills such as perceived self-efficacy, in which girls scored consistently lower than boys. It was found that among the group of practicing entrepreneurs (though not among the group of non-entrepreneurs), gender did not have a significant effect on self-efficacy, suggesting that women who choose an entrepreneurial path have higher entrepreneurial self-efficacy than those who do not. Even nascent female entrepreneurs did not have significantly different expectations about entrepreneurial success than their male counterparts. Are women with higher self-efficacy more likely to choose entrepreneurship, or does their self-efficacy grow after embarking on their careers? In examining a younger age cohort, it was found that adolescent girls and boys interested in entrepreneurship scored similarly on entrepreneurial self-efficacy. Further, girls with high levels of interest in entrepreneurship had higher self-efficacy than boys interested in the same career path. Training geared at forming high entrepreneurial self-efficacy in girls may contribute to reducing gender differences in attitudes to entrepreneurship.

Finally, a controlled experiment was conducted in Togo with 1,500 small businesses to test which components of entrepreneurship education are most effective in increasing sales and profit outcomes. Businesses were randomly

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split into three groups: one received cognitive (or hard) skills training, a second received non-cognitive (or soft) skills training, and the third received no training (control group). Impact was tracked every six months, with five rounds of follow-up over two and a half years. Results indicated that only the group that received non-cognitive skills training reported a significant increase in sales (17%) and profits (30%) compared with the control group.

Analysis of secondary outcomes suggested that such a difference in training outcomes cannot be attributed to differences in learning or in the business practices adopted. Instead, it can be linked to the different ways in which entrepreneurs invest in labor and capital as a result of training received. The training that led to increased sales and profits focused on strengthening personal initiative and resilience. These newly acquired skills emerged in follow-up surveys, where it was reported, for example, that people worked longer hours and that more innovative products were introduced. Although adults were used in this study, it elegantly illustrates that the soft skills acquired through training brought a discernible and measurable value to the business.

The impact of early entrepreneurship education is not easily measurable, but teaching entrepreneurial non-cognitive skills to a younger cohort may be creating a bedrock from which all manner of benefits (whether business-orientated or not) might spring:

1. Entrepreneurial non-cognitive skills learnt early in life help to raise entrepreneurial awareness and help young people to build a resilient entrepreneurial mindset, which may constitute a protective factor against not in education, employment, or training.
2. People who attend entrepreneurial training programs later in life have often been exposed to entrepreneurial training in their past. These are described as dynamic spill-over effects.
3. Exposure to non-cognitive entrepreneurial skills positively impacts young people’s entrepreneurial intentions.
4. Early entrepreneurship education can help to reduce the limiting effects of low self-efficacy in girls and increase the chances for successful venture creation by women.


Early entrepreneurship education at African Leadership Academy

ALA delivers entrepreneurship training to young people of various age ranges (from 13-22) through activities under the Anzisha at Scale Program and through its flagship Diploma program. Interventions range from short term interventions through Build-in-a-Box (BiaB) camps, short-to-longer term activities supporting young African entrepreneurs through the Anzisha at Scale Program, and a two-year Entrepreneurial Leadership (EL) Program embedded throughout the curriculum of its Diploma program (high school). BiaB is a model in which intense, two-day entrepreneurial leadership camps are organized and facilitated by peers (i.e. young Africans, primarily ALA Diploma program students and alumni) for groups of young people across various African countries. Content is built around all the integral steps of the design-thinking that BUILD\textsuperscript{16} embodies, in a streamlined and condensed form. BiaB camps are primarily aimed at generating wider interest in entrepreneurship, creating a larger group of youth with positive attitudes towards entrepreneurship. Camp participants can become catalysts for entrepreneurship, creating a more positive climate and peer-level support for youth with entrepreneurial ambitions. By strengthening the entrepreneurial ecosystem (via more positive attitudes) and possibly through youth ventures, it eventually aims to contribute to the challenge of youth unemployment. BiaB camps also serve as an important component of the two-year Entrepreneurial Leadership (EL) program at ALA, as EL program students serve as facilitators of the camps. The BiaB model is highly cost-effective and scalable. ALA’s emergent learning from BiaB is that participants report increased self-efficacy and entrepreneurial interest even through this short-term exposure, capturing youth as young as age 13. Thus far, these increases appear to be similar for female and male participants. Analysis of pre- and post-camp survey results (n= 987) indicates that there are statistically significant changes between participants’ perceptions on Entrepreneurial Leadership before and after participating in the camps. In addition, survey components related to problem-solving showed significant changes before and after camps, as did self-efficacy related to skills development: P (two-tailed) < 0.003. Chart 1 below illustrates these findings in more detail.

\textsuperscript{16}http://alasummer.org/2014/05/05/gsp-curriculum-the-build-process/
Entrepreneurship experience is delivered through, amongst other tools, the Student Enterprise Program (SEP).

ALA’s Diploma program serves youth aged 16-19 through a two-year pre-university curriculum in which Through SEPs, all students work in 2-6 person ‘enterprise teams’ to operate an actual on-campus business, nonprofit or start-up, through authentic simulation in a controlled environment. Through SEPs, students actively engage in all aspects of running a business or social enterprise, including developing business and marketing plans, conducting audits, and formally presenting performance and results to formal Boards comprised of professionals from area industries and the broader ALA community. Though baseline data has not been captured on entry to ALA, upon graduation ALA students report high confidence in skill and ability to succeed in entrepreneurial endeavors (4.1 out of 5 average over 3 years) and moderate degree to which experience of running an SEP prepared them to lead own enterprise in future (3.7 out of 5 average over 3 years, where 1 = strongly disagree and 5 = strongly agree)\textsuperscript{17}. Additionally, ALA has begun to capture the evolution of critical thinking skills through an externally-normed assessment which is indicating significant growth in analysis and problem solving, critiquing an argument, and critical reading and evaluation skills from baseline to graduation. While further research is necessary, these results are likely at least partially related to ALA’s EL curriculum. Moreover, according to recent self-reported alumni data, approximately one in four of ALA graduates is involved in some sort of entrepreneurial activity, most of which are in Africa. Although further and more rigorous research is necessary, these findings suggest that entrepreneurial training during the secondary program may manifest in entrepreneurial mindsets and entrepreneurial dividends to Africa among ALA graduates over time.

\textsuperscript{17} Year Two Exit Survey Summary (2015-2017), Internal Document, ALA 2017
The Anzisha-at-Scale Program celebrates and supports Africa’s youngest entrepreneurs. Therein, the Anzisha Prize aims to strengthen the African entrepreneurial ecosystem by inspiring African youth to engage in entrepreneurship using relatable role models and by influencing ecosystem stakeholders to better support (young) youth entrepreneurship. The Academy also supports Anzisha fellows and their ventures to develop faster through the Young Entrepreneur Support Unit (YES-U) Program. A recent evaluation of the program articulated the challenging position of ALA regarding its focus on a younger youth population segment than most organizations operating in the space of entrepreneurship training in Africa. Challenges mainly derive from the comparative difficulty of capturing the effect of the education and experiential learning delivered compared with programs that target older youth (ages 19 and above), where outcomes are easier to measure. Nevertheless, evaluation results show clear impact on the mindset of participating youth, as well as evidence among participants of a strong sense and willingness to become agents of change, explore opportunities, and give back to society.

**Implications for ALA and the field**

The long-term impact of entrepreneurship exposure and training for very young people requires sustained attention to measurement and merits monitoring in more precise ways (focusing on outcome pathways) with specific evaluation techniques (including counterfactual analysis) building on ALA’s emergent learning and the research summarized in this Learning Brief. Preliminary findings from ALA suggest that interventions of different nature and duration (for example, two-day BiaB camps, the one-week Anzisha Prize workshop, and the two-year EL Diploma Program) for particularly young (pre- and early-teen) populations can potentially generate significant changes in participants’ perceptions of and interest in entrepreneurship, confidence to engage in entrepreneurial activities, and related core skills.

ALA’s experience to date indicates that the challenges of measuring effects of entrepreneurship training for very young people are far outweighed by the potential social returns. While measuring the effects of entrepreneurial training for very young (pre- and early-teen) population segments is more challenging than that of older youth segments, the case for sustained investments in program interventions for Very Young Entrepreneurs (VYEs) is thus far strengthened by ALA’s emergent learning, especially when combined with broader literature from the field.