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Educating Future Founders

SAM DUMITRIU

THE ENTREPRENEURS NETWORK IS A THINK TANK FOR BRITAIN'S MOST AMBITIOUS ENTREPRENEURS.

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“There is an untapped opportunity to promote economic growth and reduce unemployment by expanding access to entrepreneurship education to secondary school students across the Commonwealth, and in particular within developing countries.”

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FOREWORDS



ROB MAY
Chief Executive Officer,
ABE Global

ABE is an education non-profit, operating globally to improve business and entrepreneurial skills.

We tell our children to dream big... and they do. Young people are bursting with imagination. They soak up knowledge, they take risks and are natural collaborators and inventors. Despite this, when I visit schools around the world, the question I get asked most often by children is “How can I become an entrepreneur?”

Entrepreneurship education remains largely bracketed in universities and business schools, routes which are not always accessible. The research underpinning this report asks, what if we reached down into schools and gave all children the skills to channel their instincts into entrepreneurial initiatives? What if we de-mystified self-employment and prepared children to become future founders?

Imagine using entrepreneurship education as a platform for teaching financial literacy and adaptability skills, for promoting resilience to the many obstacles faced when building companies and encouraging healthy attitudes to the rewards. This research reveals that entrepreneurship education at an early age also has wider benefits. Learning entrepreneurial traits also promotes creativity, teamwork, leadership, persistence, and confidence which have applications in other subjects. It can also empower children to critically analyse information and discover truths. If we harness the boundless energy of the younger generation to solve society's most pressing problems, they may grow up helping to reduce poverty by generating jobs and value in their local communities.

With close to 50 years' experience in business skills development, ABE is delighted to support this exciting research programme because we passionately believe that both children and society stand to benefit greatly from early entrepreneurship education. This was true before the pandemic, but now our global economic recovery depends on entrepreneurial competencies being available to a whole generation.

This research takes a vast perspective by examining the case for school-age entrepreneurship education across multiple countries and cultures. The results of these interventions speak for themselves but combined for the very first time in one conclusive report, they offer policymakers and educators vital context for rethinking curriculum planning. There must be a sense of urgency if we are to equip young people to thrive in the post-pandemic modern economy. This research shows that it doesn't take much to motivate young people to think like entrepreneurs, Educating Future Founders should persuade us all to take immediate steps. If there was ever a moment to inspire a younger generation of entrepreneurs, it is today.



BARONESS D'SOUZA
Former Lord Speaker

This report deals with both. The Covid crisis has had, and will continue to have, deep consequences – among the most important being the widening gap between the “just about managing” and the severely poor. The latter group of people will be disproportionately affected with a consequent drop in education, of girls primarily, and the inevitable unemployment figures that will follow countries that have an abundance of talented and motivated young people. This is a waste and a tragedy – it is also a cause of social and political unrest.

This important, and timely, report demonstrates that the above dismal trend need not continue. It shows that early, inspired and creative inputs can make a difference. At the extreme, the difference between a threadbare and uncertain life and one which capitalises on our greatest resource: the entrepreneurial young. The outcomes for individuals, society and the world are obvious.

That the report is timely arises not only from the extraordinary global conditions with which we now live, but also because the whole question as to how we equip our children for the 21st

There are two well-worn truths that we would do well to remember. First, when you educate a child you end up educating the village and ever wider communities. The second has gained prominence in the last few months – many of the jobs that our children will have in 20 years have not yet been invented.

century digital world is one occupying many minds. There is disquiet abroad. Do we continue with the old models of education and exams designed for another century and thereby consign children the world over to compete in an increasingly unequal world, or do we have the courage and the political will to use the resource that surrounds us?

This is also a perennial development assistance issue. Nowadays we mouth all kinds of adages about ownership of sustainable programmes, but we still focus too heavily, not of course with malign intent, on the aspirations of a western pre-digital society. This report captures a new energy and new ways of communication; it must also herald a wholly different approach to development.

In 2002 I helped to found, and am now a patron of, a school in Afghanistan that began as three shifts in a tiny bombed-out building for 30 students, ranging in age from 7 to middle-aged women. The school flourished and educating girls became the norm in a community savagely punished by the Taliban in previous years. The students spotted a gap in the market; blood typing was needed for every conceivable official document but facilities were few and far between, and expensive. Students, with help from teachers, devised and set up a blood-testing laboratory.

This was but one entrepreneurial project – others included setting up local radio and mechanics workshops. The ingredients for these initiatives included imagination, confidence and teachers willing to take a risk. The cost was ridiculously small compared to the output, and yet, how many of the major development agencies would have been prepared to provide a few hundred dollars for some laboratory equipment?

It is tempting to sink back into older and well-tried approaches to education and to development – but the opportunity to use the pandemic as a jumping off point for new and radical thinking and, most importantly, funding is here. I congratulate ABE Global and The Entrepreneurs Network on what should become a milestone report.

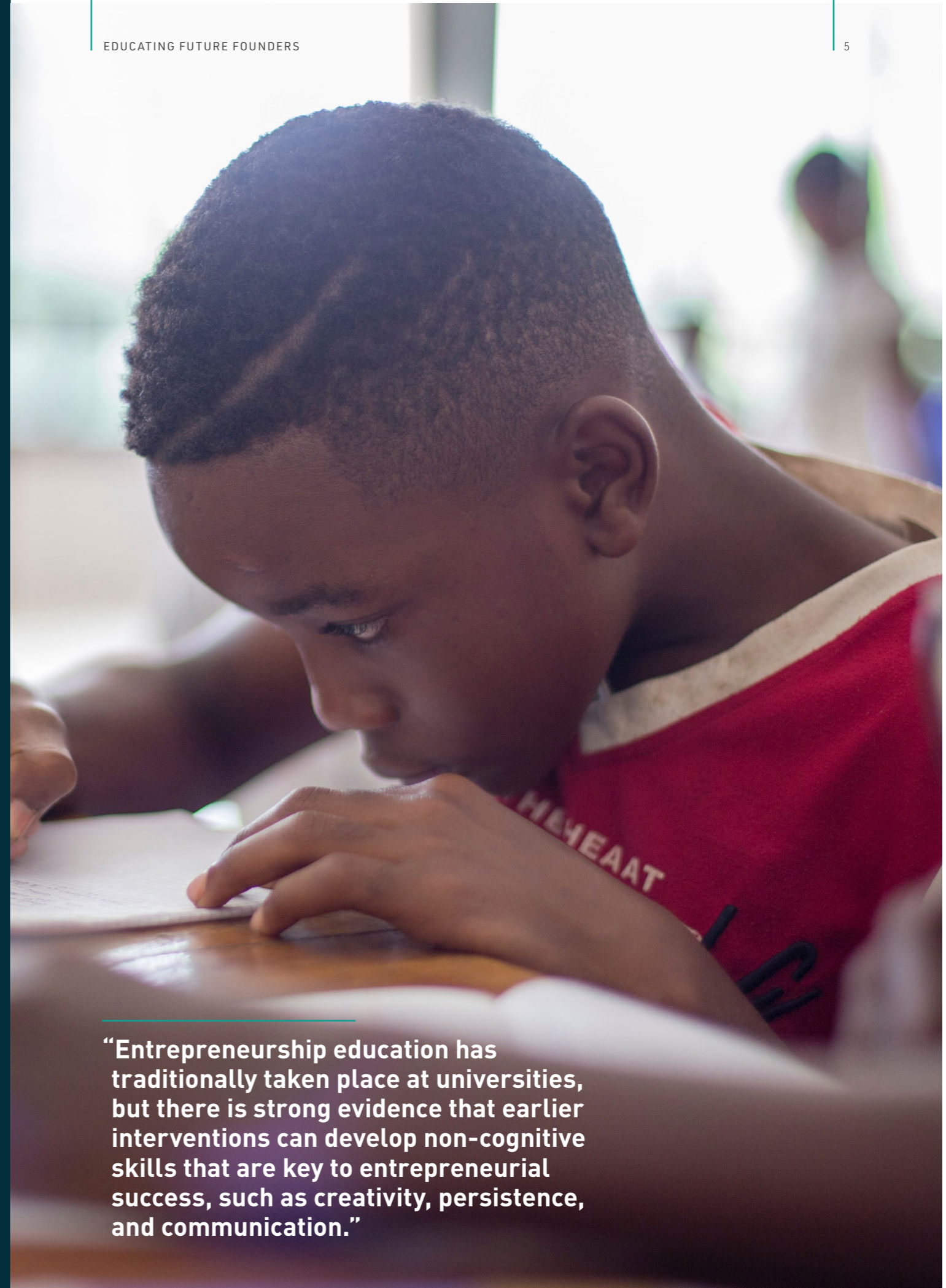
“Entrepreneurship education can complement other forms of education. For example, entrepreneurship programmes in Denmark and Uganda have been shown to increase student engagement in other subjects.”

EXECUTIVE SUMMARY

- There is an untapped opportunity to promote economic growth and reduce unemployment by expanding access to entrepreneurship education to secondary school students across the Commonwealth, and in particular within developing countries.
- Entrepreneurial skills are valued by employers and entrepreneurship education programmes aimed at secondary school students have been shown to reduce the risk that a young person will become unemployed later in life.
- A third of young people aged 18-24 worldwide intend to start a business in the next three years. Entrepreneurial intentions are strongest in Sub-Saharan Africa (SSA) and Latin America and the Caribbean (LAC) where over half of young people intend to start a business.
- Skills developed through entrepreneurship education such as financial literacy, business awareness, and an entrepreneurial mindset are becoming ever more relevant as gig economy platforms lead to increased levels of self-employment.
- Entrepreneurship education has traditionally taken place at universities, but there is strong evidence that earlier interventions can develop non-cognitive skills that are key to entrepreneurial success, such as creativity, persistence, and communication.
- In many Commonwealth nations, higher-education participation rates are low. As a result, expanding access to entrepreneurship education in schools will enable more of the next generation to benefit.
- Entrepreneurship education can complement other forms of education. For example, entrepreneurship programmes in Denmark and Uganda have been shown to increase student engagement in other subjects.
- Entrepreneurship education can lead to long-run entrepreneurial success. An analysis of Junior Achievement’s Company Programme, the most widely taught entrepreneurship programme in the world, which followed 9,731 Swedish participants over sixteen years found that participants were more likely to start a business. Participants earned on average 10.2% more from entrepreneurship more than a decade after compared to entrepreneurs who did not participate.
- Short interventions lasting as little as six hours aimed at secondary-level pupils can have long-lasting impacts on entrepreneurial traits and intentions.

To expand access to entrepreneurship education at secondary level, this report makes three key policy recommendations:

- To identify best practices in entrepreneurship education, governments should improve data collection and fund Randomised Controlled Trials (RCTs).
- Once best practices in entrepreneurship education are identified, the Commonwealth Secretariat should promote them through the Education Hub, support members to develop new curriculums, and work with organisations such as the Global Entrepreneurship Monitor to create a Best Practice Index.
- To drive positive change, national leaders should assign clear responsibility within education and business departments for promoting entrepreneurship education at secondary level.



“Entrepreneurship education has traditionally taken place at universities, but there is strong evidence that earlier interventions can develop non-cognitive skills that are key to entrepreneurial success, such as creativity, persistence, and communication.”

WHY WE NEED FUTURE FOUNDERS

Entrepreneurship drives prosperity. It is the world's most powerful poverty-reduction tool. It disrupts monopolies, creates new jobs, and finds innovative solutions to our most pressing problems. From tackling the COVID-19 pandemic through the design of low-cost ventilators to developing new cleaner sources of energy, our future depends upon us harnessing the power of entrepreneurship.

Policymakers increasingly recognise that for young people in many places, entrepreneurship is an alternative to joblessness. For instance, in response to high rates of youth unemployment, the Commonwealth and the UN Conference on Trade And Development (UNCTAD), developed a *Policy Guide on Youth Entrepreneurship*.¹

Across the globe governments of all political stripes are trying to promote entrepreneurship. Their efforts vary from public investment in venture capital funds and incubators to tax relief and regulatory reforms aimed at reducing the cost of doing business. But the success of the hundreds of later-stage interventions relies upon a pipeline of entrepreneurial talent able to take advantage of them.

By expanding access to business and entrepreneurship education, governments can support that pipeline. This can work in two key ways. First, by inspiring more young people to think like entrepreneurs. Second, by equipping young people with the skills and knowledge to turn their business ideas into reality.

Skills in demand

Young people across the world are showing interest in entrepreneurship as a career path. Data from the Global Entrepreneurship Monitor (GEM), which surveys individuals starting businesses in over 100 economies, finds that a third of young people aged 18-24 worldwide intend to start a business in the next three years and a further 14% are already running businesses. The same survey found that young people aged 18-34 are 1.6 times more likely to want to start a business than adults aged 35-64.² Polling commissioned by The Entrepreneurs Network and Octopus Group found that 51% of Britain's young people (aged 14-25) have thought about starting a business and a further third are open to the idea.³

One potential explanation for why so many young people intend to start businesses is that the same data shows they have a greater tolerance for risk taking. This may be because failure is less costly for younger people than for older people, who often have families to support and other financial obligations. Alternatively, it may be a result of youthful naivety leading them to underestimate the risk.

Young people in Sub-Saharan Africa (SSA) and Latin America and the Caribbean (LAC) show the highest intentions of becoming entrepreneurs, with over half of young people expressing an intention to start a business.⁴ However, a significant proportion of young people in SSA are pursuing entrepreneurship out of necessity (e.g. a lack of good work opportunities), rather than having identified a profitable business model. The majority of young entrepreneurs in the above two regions will not employ anyone other than themselves.⁵ It is important then that more of these young entrepreneurs are prepared in order to maximise the potential for poverty reduction.

Yet the demand for entrepreneurial skills is not limited to young people who intend to start businesses. Financial literacy, business knowledge, and an entrepreneurial mindset are skills that most young people, in any setting, will find useful. For instance, in low and middle-income countries (LMICs), three-quarters of workers are self-employed.⁶ While in high-income countries such as the UK, Australia, and New Zealand, there has been a dramatic rise in self-employment. For example, the number of British young people who work for themselves has doubled since 2001.⁷

- 1 UNCTAD. (2015) *Policy Guide on Youth Entrepreneurship*.
- 2 Schøtt, T., Kew, P., and Cheraghi, M. (2015) *Future Potential: A GEM perspective on youth entrepreneurship*. Global Entrepreneurship Monitor.
- 3 Dumitriu, S. (2019) *Future Founders: Understanding the next generation of entrepreneurs*. The Entrepreneurs Network.
- 4 Schøtt, T., Kew, P., and Cheraghi, M. (2015) *Future Potential: A GEM perspective on youth entrepreneurship*. Global Entrepreneurship Monitor.
- 5 Ibid.
- 6 Burchell, B., Coutts, A., Hall, E., and Pye, N. (2015) *Self-employment programmes for young people: A review of the context, policies and evidence*. International Labour Organisation.
- 7 Office of National Statistics (2018) *Trends in self-employment in the UK*.

“The number of British young people who work for themselves has doubled since 2001.”

33%

OF YOUNG PEOPLE AGED 18-24 WORLDWIDE INTEND TO START A BUSINESS IN THE NEXT THREE YEARS.

Source: Global Entrepreneurship Monitor (GEM).

This rise in self-employment has been driven by technology as gig economy platforms such as Uber, Upwork, and Ola rewrite the traditional employer-employee relationship and create opportunities for workers to be independent. In this new app-driven world, it will be the workers with the skills to manage their finances, identify opportunities, and plan for the long term, who thrive.

The risk of creative destruction is also forcing employers to seek out employees who think like entrepreneurs. Employers will pay a premium for workers who are able to spot new opportunities and adapt to the challenges posed by technological disruption. Recent data from the Global Entrepreneurship Monitor survey found that more than 8% of adults are involved in entrepreneurial activities as part of their employment.⁸ The tasks performed by these so-called 'intrapreneurs' can vary from developing new goods and services to identifying new markets. Employers are also sponsoring employees to start their own businesses. In over a fifth of the countries tracked by the Global Entrepreneurship Monitor, the number of people starting or running a new business, where ownership is shared with their employer, exceeds the level of independent entrepreneurship.

Productive entrepreneurship

As more and more young people aspire to be entrepreneurs, it is important that we promote sustainable entrepreneurship.

Most businesses fail, but while some failure is the inevitable result of market competition, we should try to reduce the number of businesses that fail due to lack of preparation or training. Policymakers should not prioritise quantity at the expense of quality.

The right training and education can reduce the risk of failure and ensure that when businesses are started they go on to create more and better jobs. Research from the Business Stay-Up campaign finds a link between human capital and entrepreneurial success.⁹ Using OECD education data, it found that education contributed positively to entrepreneurial outcomes. Entrepreneurs with qualifications in business, law, and the social sciences (such as economics) employ more people and are less likely to fail.

The impact of training on entrepreneurial success is likely to be driven by the adoption of better management practices. A growing body of research finds a strong link between adopting managerial best practices, such as setting targets, incentivising workers, and tracking inventory, and business success. Businesses that score higher on the World Management Survey (a checklist of managerial best practices) see faster revenue growth, employ more people, and are less likely to fail. Management is a key determinant of productivity, explaining one-third of the

14%

OF YOUNG PEOPLE AGED 18-24 WORLDWIDE ARE ALREADY RUNNING THEIR OWN BUSINESS.

productivity differences between nations and one-fifth of productivity differences between businesses in the same country. This matters because in the long run, productivity determines wages and living standards.¹⁰

There is evidence that interventions in LMICs designed to improve the quality of management are cost-effective and create large benefits. One study found that Indian textile plants that received management training from Accenture were able to cut quality defects by 50%, inventories by 40% and raised overall productivity by 10%.¹¹ A follow-up study found that managers kept the majority of the recommended practices ten years later, leading to a long-run productivity gain of 19%.¹² Another study, which looked at SMEs in Mexico found access to a year of management consulting led to a 50% increase in employment five years later.¹³

By improving the quality of management and ensuring more business owners adopt best practices, expanding access to entrepreneurship education has the potential to sustainably increase incomes and reduce poverty across the Commonwealth.



CASE STUDY SCHOOL ENTERPRISE CHALLENGE

Education that pays for itself.

Teach a Man to Fish is a charity that aims to break the cycle of poverty by equipping young people with the skills, knowledge, and mindset to succeed in work and life. They use an innovative school-business model, the School Enterprise Challenge, where students set up real businesses within school and use the profits to expand access to quality education.

Teachers at participating schools receive in-person training and online resources to help students start their own businesses. Student teams are supported to develop business ideas, complete market research, create a financial plan, and eventually run a real business within the school. Through hands-on experience, students develop business skills and an entrepreneurial mindset. At the end of the school year, students are invited to reflect on their experience, before handing over their businesses to a group of students when they graduate. The next group of students can choose whether to continue the existing business model or to pivot to offer new products or services.

Most (84%) student businesses are profitable, with the average business generating £204 a year. Student businesses have been used to fund scholarships for low-income students, purchase better classroom resources such as computers, and provide seed funding for future student businesses.

Educators may be concerned that entrepreneurship programmes may distract from other subjects, but the School Enterprise

Challenge shows how entrepreneurship education can complement other programmes. In India, Choithram School uses school business activities in subjects such as Maths, ICT, and Economics to demonstrate practical applications of the skills they learn in class. Furthermore, half of the profits generated by "Good Earth", the school's eco-friendly student business, are used to purchase school books for low-income students.

An evaluation of the School Enterprise Challenge in Uganda found that young people who were involved in school businesses drop out of school at a rate of less than half the national average. School Enterprise Challenge participants also perform better in STEM (science, technology, engineering, and maths) subjects, compared to students who didn't participate.

In Uganda, former participants earn 26% more than the national average wage. A former participant from Rwanda, Frank, noted the skills developed in the programme lead to higher earnings for him. "The school business was a great way to run a real business and sell a tangible product, knowing the cost of production and profit estimation. I used these skills to negotiate the job I have today."

Setting up a school business can build confidence and empower students to raise their ambitions. Triana, a student from Nicaragua, highlights this effect: "Before I thought about leaving school and getting a job in the tourism industry, but now I'm thinking of setting up my own business and continuing with my studies."

8 Bosma, N et al (2020) *Global Entrepreneurship Monitor 2019/2020 Global Report*. Global Entrepreneurship Monitor.

9 Heller Sahlgren, G. (2018) *Human Capital and Business Stay-up*. Centre for Education Economics.

10 For a more detailed review of the link between management and productivity see: Dumitriu, S. (2019) *Management Matters*. The Entrepreneurs Network.

11 Bloom, N. et al. (2013) Does Management Matter? Evidence from India. *The Quarterly Journal of Economics*, 128(1), 1-51.

12 Bloom, Nicholas, et al. *Do management interventions last? evidence from India*. The World Bank, 2018.

13 Bruhn, M., Karlan, D., & Schoar, A. (2018). The impact of consulting services on small and medium enterprises: Evidence from a randomized trial in Mexico. *Journal of Political Economy*, 126(2), 635-687.

“Most of what you hear about entrepreneurship is all wrong. It’s not magic; it’s not mysterious; and it has nothing to do with genes. It’s a discipline and, like any discipline, it can be learned.”

Peter Drucker



CAN WE TEACH ENTREPRENEURSHIP?

Some argue that entrepreneurship is not something that can be taught but must either be learned on the job or is determined by genetics.^{14,15} There is an element of truth to both suggestions. Not everyone is born with the same aptitude for entrepreneurship, and hands-on experience is valuable, but research shows there is a positive link between entrepreneurship education and entrepreneurial activity.

As Harvard’s Prof. Howard Stephenson notes: “You cannot teach someone to become a Bill Gates, [just as you can’t] teach someone to compose like Beethoven. But you can teach someone the notes and scales, give them the tools they need to become a composer. And you can teach the tools people need to be entrepreneurs”.

One of the challenges in teaching entrepreneurship is that entrepreneurial success is as dependent on having the right attitudes and behaviours, as it is on possessing the specific know-how to run a business. A study of micro-entrepreneurs in Togo highlights the former’s importance to entrepreneurship education. Business owners who took part in a personal initiative training programme that focused on entrepreneurial behaviour and cultivating a proactive mindset saw a 30% increase in profits over two years, compared to similar micro-entrepreneurs who were taught traditional business skills.¹⁶

In Europe and the US, entrepreneurship education is most likely to take place in a university setting. A recent review by the All-Party Parliamentary Group for Entrepreneurship surveyed the research on the effectiveness of enterprise education in higher education.¹⁷ It found evidence that participating in enterprise education programmes at university leads to higher earnings, a greater likelihood of starting a business, and promotes the transfer of technology from university to the private sector.

For instance, a study of an entrepreneurship programme at the University of Arizona found that graduates of the programme were three times more likely to start a business, compared to other business students.¹⁸ Furthermore, entrepreneurship graduates earned 27% more than non-entrepreneurship graduates after controlling for personal characteristics. This was the case even for entrepreneurship graduates who end up working for a large firm, supporting the view that employers value entrepreneurially-minded employees. Likewise, Norwegian graduates of entrepreneurship programmes were half as likely to be unemployed compared to other students on similar non-entrepreneurship courses.

“One of the challenges in teaching entrepreneurship is that entrepreneurial success is as dependent on having the right attitudes and behaviours, as it is on possessing the specific know-how to run a business.”

14 Fake, C. (2011) Entrepreneurship Can’t Be Taught. *The New York Times*.

15 Fisher, J. L., & Koch, J. V. (2008). *Born, Not Made: The Entrepreneurial Personality*. ABC-CLIO.

16 Campos, F., Frese, M., Goldstein, M., Iacovone, L., Johnson, H. C., McKenzie, D., & Mensmann, M. (2017). Teaching personal initiative beats traditional training in boosting small business in West Africa. *Science*, 357(6357), 1287-1290.

17 Salter, P. (2018) *Enterprise Education*. APPG for Entrepreneurship.

18 Charney, A., & Libecap, G. D. (2000). *The impact of entrepreneurship education: an evaluation of the Berger Entrepreneurship Program at the University of Arizona, 1985-1999*.



Further evidence of the positive impact of entrepreneurship education on new business creation comes from Denmark. A long-term study of university students found that entrepreneurship students were more likely to start businesses than other similar students.¹⁹ It also found entrepreneurship education leads students to become more creative and approach entrepreneurship with a more positive attitude.

Taking an overview of the field, a meta-analysis of Entrepreneurship Education and Training (EET) research, which reviewed 42 studies, found a significant positive relationship between EET and entrepreneurship-based human capital.²⁰ It also found a positive, but slightly weaker, relationship between EET and entrepreneurial outcomes. However, the researchers found significant variation in size of the effects across different studies. This may be a result of methodological weaknesses of some of the studies reviewed. Alternatively, it may indicate that entrepreneurship education programmes vary in quality. The researchers also found that programmes that provide a broader conceptual understanding of entrepreneurship covering issues such as how opportunities are identified outperformed narrower programmes focused on core entrepreneurship knowledge and skills.

It is understandable that entrepreneurship education has traditionally been aimed at university students. Spinout-businesses started at university by students and academics can have a massive economic impact. For example, spinouts

from the Massachusetts Institute of Technology (MIT) alone employ over three million people. Furthermore, university students are more likely to use the skills they have learned while the lessons are still fresh in their memory.

“Entrepreneurship education leads students to become more creative and approach entrepreneurship with a more positive attitude.”

However, there is also a strong case for intervening at an earlier stage. The next section explains the psychological, economic, and demographic case for expanding access to entrepreneurship education programmes to secondary school pupils.

¹⁹ Moberg, K. (2014) Impact of Entrepreneurship Education in Denmark - 2014. Danish Foundation for Entrepreneurship.

²⁰ Martin, B. C., McNally, J. J., & Kay, M. J. (2013). Examining the formation of human capital in entrepreneurship: A meta-analysis of entrepreneurship education outcomes. *Journal of business venturing*, 28(2), 211-224.

CASE STUDY JUNIOR ACHIEVEMENT'S COMPANY PROGRAM

The world's largest entrepreneurship education programme

Junior Achievement's Company Program is the world's largest entrepreneurship education programme. Each year 464,000 school-age students spread across 100 countries take part. The programme, which has been running for a century, takes students through the process of starting a business from idea to liquidation.

Over 26 one-hour sessions (or 13 two-hour sessions) students break out into teams and develop business ideas that fill a need or solve a problem. Students then carry out market research to vet their ideas and develop a business plan. Participants spend the majority of the process actually running their business, carrying out roles such as sales, marketing, as well as designing and producing their product. At the end of the process, students conclude the business, decide what to do with the profits, and reflect on what they've learnt.

The process brings together teachers with volunteers from business. Over 470,000 business mentors volunteer for Junior Achievement worldwide. There is a competitive element to the

Company Program. At the end of the process, student businesses compete in regional and national competitions.

Operating in over 100 countries, the programme is equally applicable in developed and developing economy settings. However, it may be particularly important in the developing world. Junior Achievement Africa notes that for every 100 high school students, only eight will participate in higher education and only four will graduate. In this environment, teaching young people the skills to start and run a business is especially relevant.

As the Company Program has been operating for over 100 years, it's possible to assess its long-run impact by following up with students decades later. An evaluation of the programme in Sweden found participants earned on average 10.2% more from entrepreneurship more than a decade later. A further Norwegian study found participation means graduates were more likely to be employed in a leadership role.




 $\frac{1}{2}$

OF ENTREPRENEURS HAD A
ROLE MODEL WHEN THEY
STARTED.

 $\frac{1}{3}$

BELIEVED THEY WOULD NOT
HAVE STARTED UP THEIR
VENTURE WITHOUT THIS
ROLE MODEL.

Source: Entrepreneurship and role models, from the *Journal of Economic Psychology*.

WHY EARLIER INTERVENTIONS ARE JUSTIFIED

A wide range of research suggests that educational interventions are more effective when they are targeted at an earlier stage of education.

Earlier interventions have two key benefits. First, they expand options and allow students to build on their knowledge at a later stage.²¹ Second, earlier interventions have a greater effect on the development of non-cognitive skills, which are an important aspect of entrepreneurship. Researchers studying the positive influence of early-years interventions (i.e. preschool) on earnings, find that while academic benefits fade, the non-cognitive benefits such as teamwork, self-esteem, and self-control last.²² This is important in the case of entrepreneurship as psychological traits such as self-efficacy (an individual's belief they can solve problems) and tolerance for risk-taking positively influence entrepreneurial intention.²³

There is also evidence that role models play an important role in determining whether or not an individual starts a business. Our polling of young people in the UK found that those who have thought about starting or started a company are more likely to have a family member or friend who is a business

owner, with seven in ten stating that having a family member or friend who is an entrepreneur has made them more likely to consider starting a business.²⁴ A study of 292 entrepreneurs in the Netherlands found that over half had a role model and that one-third believed they would not have started up their venture without this role model.²⁵ The research also found that so-called entrepreneurial icons with large profiles had little impact on entrepreneurial activity, with entrepreneurs placing a greater emphasis on business-owners they know personally.

Similarly, multiple studies find that the children of self-employed parents are more likely to be self-employed. Kare Moberg of the Danish Foundation for Entrepreneurship finds that these studies generally show that parents mainly influence their children through socialisation.²⁶ Research on exposure to innovation finds that children who grow up in areas with more inventors are more likely to become inventors themselves.²⁷ Furthermore, exposure to innovation at an early age affects the fields they will

“If the aim is to target students just before they enter the labour market, then in many countries intervening earlier will be necessary.”

go on to innovate in. For example, people growing up in Palo Alto are more likely to innovate in computing, even if they move elsewhere.

As scale-ups are responsible for a disproportionate share of job creation and productivity growth, it is important to understand why some entrepreneurs pursue aggressive growth strategies. In their paper *Motivations to Scale*, innovation foundation Nesta interviewed 64 European start-up and scale-up founders to understand why some entrepreneurs scale their business, while others do not.²⁸ They found that entrepreneurs that intended to scale their businesses tended to have four main mindset features: a desire to create a positive impact on society, to innovate, to become a dominant player in their field, and to create value. As mindsets are easier to influence the younger a person is, Nesta argue that entrepreneurship education can influence the type of entrepreneurship (e.g. high-growth) that young people pursue. If the aim is to improve the quality of entrepreneurship, as opposed to merely producing more entrepreneurs, then this is a reason to intervene at an earlier age.

Part of the rationale for the existing policy of targeting entrepreneurship education at university students may not apply outside of developed economies. For instance, while half (50.2%) of young people in the United Kingdom have participated in higher education, access to a university education is limited in many parts of the Commonwealth.²⁹ In Sub-Saharan Africa, only 46.6% of young people have completed secondary education and just 9% are enrolled in tertiary education.³⁰ As a result, a policy of targeting students in higher education will miss a large proportion of the next generation of entrepreneurs.

If the aim is to target students just before they enter the labour market, then in many countries intervening earlier will be necessary. Limited options in the labour market mean a high proportion of young people in regions such as Sub Saharan-Africa will pursue entrepreneurship because other options are not available to them. According to a GEM and Youth Business International report, one-third of new businesses in these regions will be created out of necessity.³¹ It is therefore important to create entrepreneurship education solutions that can be accessed by this group.

21 European Commission (2015). *Entrepreneurship Education: A Road To Success*.

22 Chetty, R., Friedman, J. N., Hilger, N., Saez, E., Schanzenbach, D. W., & Yagan, D. (2011). How does your kindergarten classroom affect your earnings? Evidence from Project STAR. *The Quarterly journal of economics*, 126(4), 1593-1660.

23 Newman, A., Obschonka, M., Schwarz, S., Cohen, M., & Nielsen, I. (2019). Entrepreneurial self-efficacy: A systematic review of the literature on its theoretical foundations, measurement, antecedents, and outcomes, and an agenda for future research. *Journal of Vocational Behavior*, 110, 403-419.

24 Dumitriu, S. (2019) *Future Founders: Understanding the next generation of entrepreneurs*. The Entrepreneurs Network.

25 Bosma, N., Hessels, J., Schutjens, V., Van Praag, M., & Verheul, I. (2012). Entrepreneurship and role models. *Journal of Economic Psychology*, 33(2), 410-424.

26 Moberg, K. (2020) Online-based entrepreneurship education - its role and effects - A randomised controlled trial about the effects of an online entrepreneurship programme based on role models.

27 Bell, A., Chetty, R., Jaravel, X., Petkova, N., & Van Reenen, J. (2018). *Lost Einsteins: who becomes an inventor in America?* (No. 522). Centre for Economic Performance, LSE.

28 Reypens, C., van Blitterswijk, D., and Haley, C. (2019) *Motivations to Scale: How European entrepreneurs think about growth and finance*. Nesta.

29 Even within the UK, a singular focus on teaching entrepreneurship in higher education institutions would have problematic implications for entrepreneurial diversity as young people from economically-disadvantaged backgrounds are less likely to attend.

30 School Enrollment, Tertiary (% gross), UNESCO Institute for Statistics.

31 Kew, J., Herrington, M., Litovsky, Y., and Gale, H. (2015) *Generation Entrepreneur? The state of global youth entrepreneurship*. Global Entrepreneurship Monitor and Youth Business International.



CASE STUDY PRINCE'S TRUST INTERNATIONAL'S ENTERPRISE CHALLENGE

Turning entrepreneurship into a game

As the international arm of The Prince's Trust, the UK's leading youth charity, Prince's Trust International works with local partners in 13 countries around the world to deliver education, employment, and enterprise programmes that empower young people to learn, earn, and thrive.

Enterprise Challenge is a school-based entrepreneurship programme with a difference. It uses a business-simulation computer game to introduce entrepreneurship as a viable career choice for young people and guide them through the basics of starting and running a business. Students are supported throughout the process by local volunteer business mentors.

As student teams play the game, their businesses are graded on how profitable, ethical, and well-known they are. Within the game, teams pick where they sell their goods, what type of goods they sell, and which overarching business strategy they pursue. For instance, they might try to sell low-quality, low-cost goods or alternatively focus on environmentally friendly products.

Founded in 2006 as part of the Prince's Trust's Mosaic programme, Enterprise Challenge was initially developed as a way of introducing BAME communities to entrepreneurship and providing them with relatable role models. It has now expanded internationally to Pakistan, Jordan, and Kenya. In Pakistan alone,

Enterprise Challenge was used in 100 schools engaging over 20,000 students.

There is a competitive element to the programme too. The highest scoring team will go on to develop a social enterprise idea with a local business mentor. They then compete in a regional final and, if successful, move on to a national final where they can gain seed funding for their business.

For example, five students from the Little Angels high school in Pishin, Pakistan received £3,000 to start 'Enterprise for Education in Pishin' – a social enterprise where student-run canteens are set-up in schools and the profits are used to fund female literacy programmes in the local area.

“A key challenge for educators and policymakers in entrepreneurship education will be developing programmes that are tailored to the needs and abilities of a younger audience.”

THE OBJECTIVES OF ENTREPRENEURSHIP EDUCATION

When developing an entrepreneurship education curriculum, it is important for policymakers to have a clear idea of the key competencies and traits it is aiming to cultivate in students. For example, the EU's influential EntreComp programme aims to teach entrepreneurship as “the capacity to act upon opportunities and ideas to create value for others.”³² By identifying fifteen separate competencies for entrepreneurship, it helps policymakers in two key ways.

First, it helps them tailor teaching to a range of different scenarios and educational contexts. Second, it assists in the design of assessments for entrepreneurship education programmes, which in turn allows policymakers to evaluate the success of various interventions.

A key challenge for educators and policymakers in entrepreneurship education will be developing programmes that are tailored to the needs and abilities of a younger audience. It is unlikely that programmes designed for university students will be equally relevant to secondary school pupils. Relatedly, some learning objectives may conflict. For instance, some initiatives may prioritise the creation of new ventures and the development of business-specific knowledge, while others may use entrepreneurship as a way of increasing interest in other subjects, such as mathematics and cultivating entrepreneurial attitudes. Before designing a new programme, policymakers must think carefully about the aims of entrepreneurship education and how to resolve any potential conflicts that may occur.

One potential conflict is highlighted by a Danish study which interviewed 1,377 students aged 14 to 16. It found

programmes that focus on enterprise-specific information and skills had a positive influence on pupils' desire to pursue entrepreneurship, but a negative impact on their engagement in school.³³ By contrast, embedding entrepreneurship in all subjects and using it as a way to increase engagement with learning tended to have a negative impact on pupils' entrepreneurial intentions.

In such cases, it may be worth tailoring programmes based on how close a student is to the labour market. This would vary by age and national economic circumstances, such as labour market conditions and university enrollment. For example, Danish secondary schools may prioritise programmes that try to develop non-cognitive entrepreneurial traits, while programmes that focus on entrepreneurship-specific content may be more appropriate in Uganda.

The next section reviews research into existing entrepreneurship education interventions to assess their effectiveness in meeting five key objectives for students in secondary education.

³² Bacigalupo, M., Kampylis, P., Punie, Y., & Van den Brande, G. (2016). *EntreComp: The entrepreneurship competence framework*.

³³ Moberg, K. (2014). Two approaches to entrepreneurship education: The different effects of education for and through entrepreneurship at the lower secondary level. *The International Journal of Management Education*, 12(3), 512-528.



Developing an entrepreneurial mindset

A key objective for entrepreneurship educators in schools is to impart pupils with an entrepreneurial mindset. An important aspect of entrepreneurial mindset is known as 'entrepreneurial self-efficacy' (ESE). Chen, Greene, and Crick define it as "the strength of a person's belief that he or she is capable of successfully performing the various roles and tasks of entrepreneurship."³⁴ In their research they focus on a few key aspects: "marketing, innovation, management, risk-taking, and financial control." In one study, they found that ESE is a key predictor of entrepreneurial intention among students. Furthermore, in another study they compared small business executives and found that ESE predicted whether or not an executive would be a founder.³⁵

Further traits associated with entrepreneurship include persistence (the ability to continue despite setbacks), need for achievement (an urge to do well and feel accomplished), propensity to take risks, social orientation (the ability to make social connections to realise new ideas), and creativity (the ability to generate many different solutions to a single problem). These traits were studied by Huber, Sloof, and Van Praag, who investigated the effects of Bizworld, an internationally-recognised entrepreneurship education programme aimed at 11-12 year olds.³⁶ Over the course of two to four weeks (five days in classroom), Bizworld aims to teach young pupils the basics of entrepreneurship and promote teamwork

and leadership within the classroom. Students are guided through a firm's lifecycle from start-up to exit. In small teams, students formulate a business plan, pitch to a 'venture capitalist', develop products, and eventually market the products to potential buyers. The programme was developed in the United States and over 350,000 students across 85 countries have participated. Huber, Sloof, and Van Praag's study looked at participating schools in the west of the Netherlands. The Dutch version of Bizworld is taught by an entrepreneur who brings in real-world examples to bring the subject to life.

“There is also evidence, consistent with the wider-psychological literature, that the earlier an intervention takes place the greater the impact on the non-cognitive aspects of entrepreneurship.”

The study, which looked at 2,751 pupils, found that students who had taken part in the programme were more likely to develop entrepreneurial traits than similar students who didn't. Specifically, participating students improved their entrepreneurial self-efficacy, their appetite

for risk-taking, their need for achievement, and their ability to analyse new complex problems. For a five-day programme, the impact is impressive. The improvements are equivalent to "being eligible to move up one track level in entering high school". Counter-intuitively, however, the programme had little impact on a child's entrepreneurial intentions or cognitive entrepreneurial skills.

Similar to *Bizworld*, the Young Achievement Australia (YAA) programme covers the life-cycle of a business and uses volunteer role models to coach students. Researchers looked at the programme's impact on young people's perceptions of the desirability and feasibility of starting a business.³⁷ Over 100 students in Grade 11 and 12 (aged 15-18) took part in YAA. Students who chose to participate in YAA were more likely to both want to start a business and believe they could start a business once they completed the programme.

One of this study's key findings was students who previously had a negative experience of entrepreneurship – whose parents' business went bankrupt, for example, or who had worked at a small company and disliked it – saw the largest positive shift in perception from taking part in YAA.

The value of role-models was highlighted by a study which looked at the impact of an online role-model based programme on over 500 pupils aged 14-15.³⁸ The students were randomly assigned to online courses that focused on

either entrepreneurship or environmental issues. One year after the intervention, students who had taken part in the entrepreneurship course had significantly higher perceived entrepreneurial knowledge and significantly more positive attitudes towards entrepreneurship. However, the impact on entrepreneurial self-efficacy was limited. While initially positive, the benefits had faded after one year.

The programme's benefits should be considered in light of the relatively low-cost nature of the programme. The programme took only four hours to complete, and as it was online could be scaled cheaply. To have an impact that persists for over a year suggests that even small interventions can significantly change young people's attitudes to entrepreneurship. The limited impact on self-efficacy may also be a function of the student's age. The older a pupil is, the harder it may be to change beliefs about self-efficacy.

The studies reviewed above suggest that short interventions aimed at school pupils can have a significant impact in developing a positive entrepreneurial mindset. There is also evidence, consistent with the wider-psychological literature, that the earlier an intervention takes place the greater the impact on the non-cognitive aspects of entrepreneurship. By contrast, entrepreneurship-specific knowledge may fade over time if not actively used in the labour market. As eleven and twelve year olds are relatively far from the labour market, interventions aimed at this age group that build confidence and entrepreneurial

34 Chen, C. C., Greene, P. G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers?. *Journal of business venturing*, 13(4), 295-316.

35 Ibid.

36 Rosendahl Huber, L., Sloof, R., & Van Praag, M. (2014). The effect of early entrepreneurship education: Evidence from a randomized field experiment. *European Economic Review*, 72, 76-97.

37 Peterman, N. E., & Kennedy, J. (2003). Enterprise education: Influencing students' perceptions of entrepreneurship. *Entrepreneurship theory and practice*, 28(2), 129-144.

38 Moberg, K. (2020) Online-based entrepreneurship education - its role and effects - A randomised controlled trial about the effects of an online entrepreneurship programme based on role models.

self-efficacy should be prioritised over job-specific training.

Improving academic engagement

Although the main aim of entrepreneurship education is often to train the next generation of entrepreneurs, one indirect benefit is that students may be more engaged in other subjects. There are a few potential explanations for why this might be the case.

First, the psychological traits developed through enterprise education, such as creativity, analytical thinking, persistence, and confidence have clear applications in other subjects. For example, a student might persist to solve a difficult maths problem when in the past they would have given up. Alternatively, the confidence developed through an entrepreneurship education programme may lead students to raise their hand and participate more in lessons.

Second, by making students aware of the relevance of what they are learning in the classroom, they may become more motivated to engage in future lessons. This is a problem well worth addressing, because a survey of American high school students found that 60% report being bored every day in class, with over a third believing that their class material was not relevant to them.³⁹ The process of starting a business will likely require students to apply knowledge they have learnt in the classroom. For example, they will need to draw on their mathematical knowledge to produce a sales forecast, thereby stressing the relevance of the lesson.

Third, participation in an entrepreneurship-based programme may reveal skills that students previously did not know they had. This may build confidence and motivate students who previously struggled in school. It may lead to pupils trying harder in other subjects and reduce unplanned absences.

There is evidence that entrepreneurship education programmes can lead to improvements in certain subjects. An evaluation of Teach a Man to Fish's School Enterprise Challenge in Uganda (see case study) found that students who had taken part improved their performance in STEM (science, technology, engineering, and maths) subjects, when compared to students who hadn't taken part. However, there was limited impact on student absenteeism.⁴⁰

Improving engagement and attainment in academic subjects may also lead to greater success in entrepreneurial efforts down the line. Entrepreneurs who achieve more in school are more likely to succeed.⁴¹ A meta-analysis of the research into human capital and entrepreneurial success found a twice-higher success rate for people with high levels of educational attainment compared to people with low levels of educational attainment. Academic knowledge may be particularly important for new businesses with young founders who are yet to develop routines and strategies to handle new problems.

“The studies reviewed above suggest that short interventions aimed at school pupils can have a significant impact in developing a positive entrepreneurial mindset.”

The idea that entrepreneurship education can lead to students becoming more motivated in their academic pursuits is supported by a Harvard analysis of the National Foundation for Teaching Entrepreneurship's (NFTE) programme. The NFTE programme teaches planning, strategising, and collaboration, alongside basic business skills in order to motivate students to invest in their own education and become financially independent.⁴² The study looked at over 300 students in two Boston high schools, half of which participated in an NFTE course as part of a collaboration between schools and the local business community, designed to “integrate the academic content of what students learn in schools with careers and jobs they could pursue after graduation.”

Students who went through the NFTE programme doubled their interest in attending college. The students who chose to take part in the NFTE programme started out with less interest in attending college than the control group, who chose a health and education-based course. However, by the end of the programme students in the NFTE group's interest in attending college surpassed that of the other group.

39 2010 High School Survey of Student Engagement (HSSSE), Indiana University.

40 Jigsaw Consulting. (2019) *School Enterprise Challenge evaluation report*. Teach a Man to Fish.

41 Unger, J. M., Rauch, A., Frese, M., & Rosenbusch, N. (2011). Human capital and entrepreneurial success: A meta-analytical review. *Journal of business venturing*, 26(3), 341-358.

42 Nakkula, M., Pineda, C., Dray, A., & Lutyens, M. (2003). Expanded explorations into the psychology of entrepreneurship: Findings from the 2001-2002 study of NFTE in two Boston public high-schools.



CASE STUDY VIVITA

Teaching young people to innovate

VIVITA is a global creativity accelerator for children and youth. Its goals are to inspire an entrepreneurial mindset, inventors' spirit, and broader interest towards STEAM (Science, Technology, Engineering, Arts, and Maths) subjects. It seeks to increase children's confidence and encourage children to pursue their dream projects. Rather than using a set-curriculum with fixed learning objectives, VIVITA aims to create a platform where children have the possibility to learn through experimenting and get inspired by adult practitioners from different fields of life.

The programme is targeted at 9-14 year olds who can work independently. Originally from Japan, VIVITA is headquartered in Estonia and operates in multiple countries: Japan, Estonia, Singapore, Lithuania, Philippines, South Korea, and the USA. It is unique in the freedom it gives children to build innovative projects. VIVITA provides open makerspace facilities and invention labs for

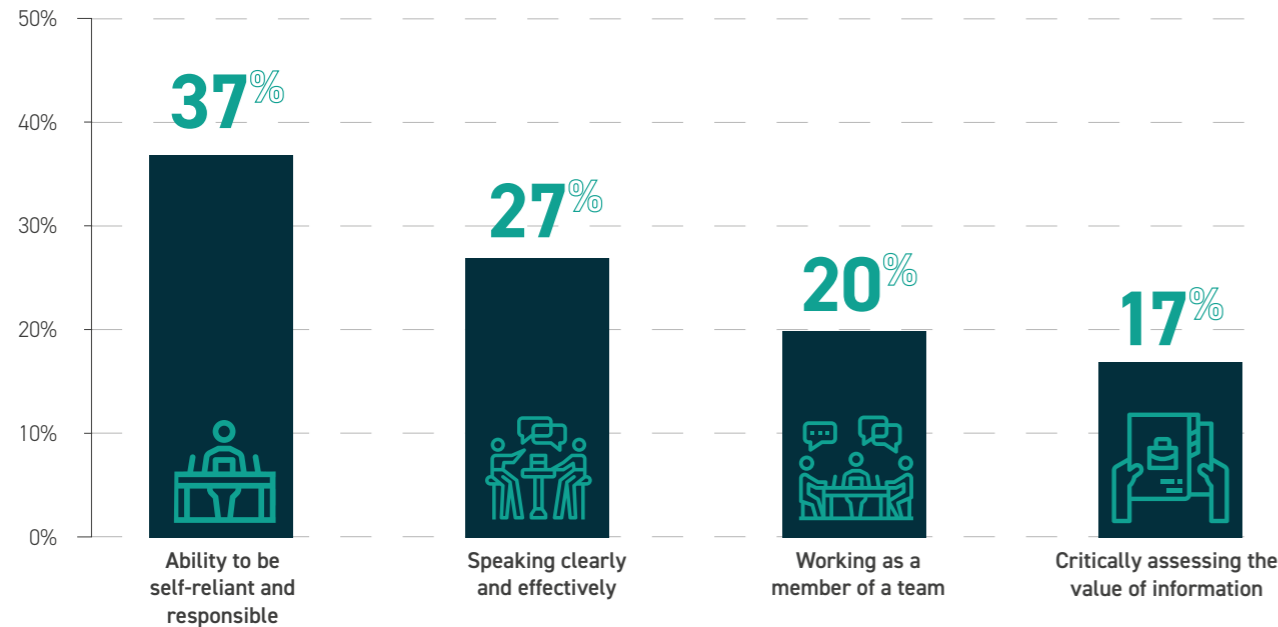
children to use to develop their own product ideas. They also invite innovators and practitioners from the local start-up and design communities to provide mentoring for the children. Unlike other programmes, there are no teachers or formal curriculum. The activities are led by children themselves and grown-ups have only a supportive and inspiring mentor role.

VIVITA co-founder Mari-Liis Lind believes the programme fosters “the skills in children that are necessary for any future founder. We encourage each child in VIVITA to think about what product/service they would like to build and mentor them in the process of getting from the original idea to a working prototype.” The programme focuses more on design and creativity, as the age-group are less passionate about business, and more passionate about making a product.

Projects made by VIVITA participants include 3D-Printed face shields, a wooden roller coaster, and a DIY Slime Kit that is in the process of commercialisation.

KEY SKILLS GAINED FROM NFTE ENTREPRENEURSHIP EDUCATION PROGRAMMES

(Source: NFTE programmes alumni survey, 2016)



However, policymakers should beware of a trade-off between academic engagement and the development of job-specific skills. A Danish study, which interviewed 1,377 students aged 14 to 16, found programmes which focus on developing non-cognitive entrepreneurial skills (e.g. an entrepreneurial mindset) lead to greater levels of school engagement. Students who had taken part in such programmes were more likely to report they ‘enjoy being in school’ and are less likely to say ‘I get bored a lot in school’. However, programmes that focused on teaching students entrepreneurship-specific knowledge, such as how to write a business plan, reduced students’ engagement with school. This suggests entrepreneurship educators must strike the right balance between teaching business-specific skills and developing an entrepreneurial mindset in young people, as an excessive focus on the latter may reduce a student’s interest in other subjects.

Increasing employability

When 400 US employers were asked to describe the skill sets that new entrants to the workforce need to succeed they listed applied skills and traits such as work ethic, oral and

written communication, teamwork, and critical thinking/problem solving.⁴³ Employers also believed that creativity and innovation would be of increasing importance for future workers, but considered over half of high school graduates deficient in this area.

Many of the skills students learn when they receive entrepreneurship education are applicable beyond starting and growing a business. The ability to stick at problems and proactively find creative solutions while working with others is desirable in any workplace. Additionally, if entrepreneurship education programmes lead to students participating more in the classroom, then the chance they will be unemployed is reduced. A 2016 survey of alumni from NFTE programmes found that becoming self-reliant and responsible (37%), speaking clearly and effectively (27%), working as a member of a team (20%), and critically assessing the value of information (17%) were the key skills gained by participating.

38%

OF UNEMPLOYED UGANDAN YOUTH SPEND OVER A YEAR LOOKING FOR WORK.

Source: Teach a Man to Fish

12%

OF SCHOOL ENTERPRISE CHALLENGE PARTICIPANTS SPENT LONGER THAN 6 MONTHS LOOKING FOR WORK.

26%

PAY GAP BETWEEN THE NATIONAL AVERAGE AND SCHOOL ENTERPRISE CHALLENGE ALUMNI.

43 Casner-Lotto, J., & Barrington, L. (2006). *Are they really ready to work? Employers’ perspectives on the basic knowledge and applied skills of new entrants to the 21st century US workforce.* Partnership for 21st Century Skills..



Teach a Man to Fish’s School Enterprise Challenge.



Research into an entrepreneurship programme at Arizona University found that students earned more after graduating even if they did not start a business themselves, but instead went on to work for a large company.⁴⁴ This could be part of a wider trend of employers demanding entrepreneurial employees who are able to manage disruption and spot new opportunities.

Further support for entrepreneurship education developing key work skills comes from a three-year study that interviewed 12,000 people across 25 schools in five countries (Belgium, Estonia, Finland, Italy, and Latvia).⁴⁵ It looked at Junior Achievement’s Company Programme and found that participants who spent 100 hours or more on their company improved significantly. Compared to a control group, they are better able to coordinate activity, make decisions, and present. There is also evidence of increased progress in social competence and participants were better motivated in school.

A separate evaluation of the Company Programme in Norway, which interviewed 600 former students aged 24-25 found that those who had participated in the Company Programme were more likely to be in leadership positions at work than those in a matched-control group.⁴⁶ A further analysis of Swedish company programme alumni found that they were 20% less likely to be unemployed when compared to the control group.⁴⁷

In a different environment, Teach a Man to Fish’s School Enterprise Challenge led to significantly better

employment outcomes in Uganda. At the time of the study, 38% of unemployed Ugandan youth spent over a year looking for work, while only 12% of School Enterprise Challenge participants spent longer than 6 months looking for work. School Enterprise Challenge alumni were also paid 26% more than the national average.⁴⁸

At a time of great economic change, it is significant that there is evidence that entrepreneurship education can develop skills that employers believe will be increasingly important in the future. It shows that expanding access to entrepreneurship education can help students even if they do not go on to start a business themselves.

Stimulating quality entrepreneurship

While it would be a mistake to evaluate entrepreneurship education on whether or not students go on to start businesses alone, developing the skills and ambitions of the next generation of entrepreneurs will always be a key objective for entrepreneurship educators.

On this front, there are a range of variables to consider. In the short term, entrepreneurial intentions will be the key measure. Do students who take part in entrepreneurship programmes leave with a greater ambition to become an entrepreneur or self-employed? But the career plans of young adults are rarely set in stone, and may change soon after leaving. Research that enables us to look at the intentions and actions of entrepreneurship students as they enter the labour market will be even more useful.

44 Charney, A., & Libecap, G. D. (2000). *The impact of entrepreneurship education: an evaluation of the Berger Entrepreneurship Program at the University of Arizona, 1985-1999.*

45 Johansen, V. (2018). *Innovation cluster for entrepreneurship education.* Lillehammer, Norway, Østlandsforskning/Eastern Norway Research Institute.

46 Tømmerbakke, J. (2017) *Research on the impact of the Junior Achievement Company Program (mini-company method).* European Entrepreneurship Education Network.

47 *A Longitudinal Investigation of Junior Achievement (JA) Sweden Alumni and Their Entrepreneurial Careers, 1990-2007*

48 Jigsaw Consulting. (2019) *School Enterprise Challenge evaluation report.* Teach a Man to Fish.



CASE STUDY KIDSMBA

Replacing trial and error with the know-how to succeed

The idea for KidsMBA came from insolvency barrister Professor Mark Watson-Gandy. He observed that many of the failing businesses he worked with were not failing because they were based on a bad idea, but rather because they were making the same mistakes. Instead of learning through trial and error, KidsMBA aims to equip young people aged 11-15 with the skills to start and run a business, while avoiding common mistakes.

The course, which can be run as an intensive programme over eight days, is designed to introduce students to the mindset, know-how, and skills to run a business. The programme concludes with a Shark Tank/Dragons Den-style competition where students pitch their ideas to investors. Students can also compete to win a Star Performer certificate or trophy.

The course, which is accredited by ABE, a not-for-profit skills development specialist and awarding organisation, is available in over 30 countries. At Umubano Academy in Kenya, where 49 students took part, four-fifths (81%) "felt the course had inspired them to run their own business." One student said "KidsMBA proves that even young people can have business ideas. The course helped us develop these ideas and made us feel valued, like our ideas matter".



"KidsMBA proves that even young people can have business ideas. The course helped us develop these ideas and made us feel valued, like our ideas matter."



Even then, however, entrepreneurial activity itself is not necessarily the end goal. Rather, our objective should be promoting high-quality entrepreneurship. One potential complication for research into entrepreneurial intentions is the possibility that more vocationally focused programmes may have different impacts on different students.⁴⁹ For instance, students who want to be entrepreneurs but were ill-suited to entrepreneurship may learn that it is not right for them as a career. This would arguably be a successful outcome. Likewise, a programme that inspired young people to start businesses before they were adequately prepared should not be considered a success. To take account of this we should look at entrepreneurial earnings, job creation, and business survival too. If possible, we should also look at students' alternative options. Are they thriving as entrepreneurs or would they have been better off as an employee?

Answering the latter question is difficult as researchers may need to follow students for a decade or more, which can be expensive. As a result, most studies focus on the more limited approach of interviewing participants before and after they take part in an entrepreneurship programme, and simply asking them whether they intend to start a business in the future.

Using this approach, Peterman and Kennedy asked high school students taking part in Young Achievement Australia about their intentions to start a business.⁵⁰ They found that the programme had a positive effect on the students' intentions to become entrepreneurs in the future.

Part of the reason the Young Achievement Australia programme shifted intentions was by making entrepreneurship seem more feasible. Survey data from the Global Entrepreneurship Monitor shows that fear of failure is a major barrier to entrepreneurship in many parts of the world.⁵¹ Within the European Union where fear of failure is highest, as many as 45% of young people believe that fear of failure is preventing them from starting a business. Even Sub-Saharan Africa, where fear of failure is lowest, one quarter of young people believe a fear of failure stops them from starting a business. The Global Entrepreneurship Monitor finds that individuals who are

confident that they have the skills and knowledge to start a business are four to six times more likely to be involved in entrepreneurial activity.⁵²

Entrepreneurial intentions also improved for participants in a Danish online role model-based programme.⁵³ The use of relatable role models from business may have been significant as a student's prior experiences with entrepreneurship did not affect the results. This may suggest that role models can inspire students who do not otherwise know entrepreneurs through their family.

“Looking at long-run outcomes, there is evidence that entrepreneurship education programmes can increase the rate that young people start businesses.”

However, not all programmes have positive impacts on entrepreneurial intentions. The Bizworld programme targeted at 11 to 12 year olds had a modest negative impact on entrepreneurial intention.⁵⁴ Yet there isn't further research into the students so it's possible the entrepreneurial mindset developed during the programme may lead to entrepreneurial intentions developing at a later stage.

Looking at long-run outcomes, there is evidence that entrepreneurship education programmes can increase the rate that young people start businesses. A survey of NFTE alumni found that a quarter of them had started a business, with more than half employing at least one other person. By contrast, only 2% of 16-24 year olds and 6% of 25-34 year olds in the US are self-employed.

The strongest evidence for the impact of entrepreneurship on entrepreneurial success is a long-run analysis of the Junior Achievement's Company Programme in Sweden, which followed 9,731 participants over sixteen years. It controlled for the risk of selection effects by



Left: VIVITA Estonia Slime making workshop. Right: VIVITA Lithuania making face shields.



matching them with a group of similar young people and found that participants were more likely to start a business.⁵⁵ Importantly, entrepreneurs who had taken part in the Company Programme earned on average 10.2% more from entrepreneurship 11 to 12 years after graduation compared to entrepreneurs who had not taken part. However, the Company Programme did not have a long-term effect on business survival. This may be due to Company Programme participants pursuing entrepreneurship in riskier sectors such as tech or hospitality. It may alternatively be a result of the programme encouraging people to try entrepreneurship, despite being less likely to succeed.

Teaching young people the basics of starting and running businesses will not only lead to more businesses starting up, but also will raise the overall quality of businesses. While more research is necessary, the high-quality evidence from Sweden shows that entrepreneurship education can have long-lasting benefits.

Expanding access

Entrepreneurship education can change lives. Across the world, programmes such as Junior Achievement's Company Programme, Teach a Man to Fish's School Enterprise Challenge, NFTE, KidsMBA, and Bizworld are building confidence and teaching valuable life skills. Some programmes have enormous reach: for instance almost twelve million children across over 100 countries took part in the Company Programme in 2019. However, many young people lack access to high-quality entrepreneurship education. In many places, it is not a priority and treated as an optional extra.

As part of the Global Entrepreneurship Monitor's National Expert Survey, leading experts are asked to score countries on a scale of one to ten on “the extent to which training

in creating or managing SMEs is incorporated within the education and training system at primary and secondary levels”. Looking at data on 78 countries over the last four years, the average score was two and only five countries scored above three (Philippines, Qatar, Norway, United Arab Emirates and Netherlands). There is significant room for improvement.⁵⁶

The case for expanding access to entrepreneurship education is strong. Not only does it create a wider pool of entrepreneurial talent, but it also helps develop mindsets and skills that are becoming increasingly important in the workplace. By promoting productive entrepreneurship, it contributes to job creation. This is particularly important as young people are more likely to employ other young people, therefore reducing youth unemployment.

With over half of young people in Sub-Saharan Africa and Latin America and the Caribbean expressing an intention to start a business at some point, it is vital they have access to high-quality entrepreneurship education to give them the best possible chance of success.

Progress on the entrepreneurship education agenda needs to be careful and evidence-led. Education systems across the world will continue to face financial pressures over the next decade as economies rebuild after the COVID-19 pandemic. It is also important to avoid placing excessive pressures on students' time. As much as possible, entrepreneurship education should complement, not subtract from, a broad academic education.

We must work to build evidence, share best practice, and promote leadership. In the next section, three key policy recommendations are made to deliver upon the ambition of access to entrepreneurship education for all.

49 Von Graevenitz, G., & Weber, R. (2011). *How to Educate Entrepreneurs?*

50 Peterman, N. E., & Kennedy, J. (2003). Enterprise education: Influencing students' perceptions of entrepreneurship. *Entrepreneurship theory and practice*, 28(2), 129-144.

51 Kew, J., Herrington, M., Litovsky, Y., and Gale, H. (2015) *Generation Entrepreneur? The state of global youth entrepreneurship*. Global Entrepreneurship Monitor and Youth Business International.

52 Ibid.

53 Moberg, K. (2020) Online-based entrepreneurship education - its role and effects - A randomised controlled trial about the effects of an online entrepreneurship programme based on role models.

54 Rosendahl Huber, L., Sloof, R., & Van Praag, M. (2014). The effect of early entrepreneurship education: Evidence from a randomized field experiment. *European Economic Review*, 72, 76-97.

55 Elert, N., Andersson, F. W., & Wennberg, K. (2015). The impact of entrepreneurship education in high school on long-term entrepreneurial performance. *Journal of Economic Behavior & Organization*, 111, 209-223.

56 Global Entrepreneurship Monitor: National Expert Survey.

Recommendation 1: Improve data-collection and fund Randomised Controlled Trials (RCTs) to identify best practices.

If policymakers across the world are to be persuaded to commit significant resources to expanding access to entrepreneurship education, then we must continue to develop the evidence base. The field of entrepreneurship education is still young and until recently most of the attention has been given to post-secondary education. Although there are high-quality studies assessing the impact of earlier interventions, many initiatives are under-evaluated.

Furthermore, research comparing different approaches and methodologies for entrepreneurship educators is limited. There is enough evidence to identify a need for more entrepreneurship education, yet the exact form that interventions should take relies on theory and guesswork.

To identify best practice, governments should commission research into the following questions:

1. Whether programmes should be teacher or entrepreneur-led? Are role models key?
2. How long should an entrepreneurship course last for? Do longer courses lead to better outcomes? Can short programmes deliver large changes? Can they be delivered online? Can entrepreneurship be integrated into existing courses?
3. Which skills should entrepreneurship education prioritise? Should programmes prioritise hands-on experience over academic teaching? Does this vary by student age?

It is also important to fund studies that take a longer view, tracking students over a decade or more. It is only through such studies that we can understand the long-term impact

Recommendation 2: Use the Commonwealth Secretariat to promote best practice in Entrepreneurship Education through the Education Hub, support the development of entrepreneurship curriculums, and create a Best Practice Index to promote entrepreneurship education across the Commonwealth.

Entrepreneurship education is key to the success of two of the Commonwealth Secretariat's aims: helping develop the capabilities of young people and in the long run boosting trade and the economy. To that end, the Commonwealth Secretariat should work to diffuse best practices across the Commonwealth.

As the evidence base grows, the Commonwealth Secretariat should use the Commonwealth Education Hub to share information on what works in entrepreneurship

on new venture creation and entrepreneurial success.

Selection bias is often an issue for entrepreneurship education research. If entrepreneurship programmes are extra-curricular and pupils voluntarily opt-in, then there is a risk that interventions are not generalisable to the wider student population. It may be that young people who volunteer to take an entrepreneurship course are more open to entrepreneurship in the first place and already possess entrepreneurial traits.

To resolve this issue, policymakers should fund randomised-controlled trials (RCTs) to test the impact of different interventions. Over the past decade or so, RCTs have become increasingly important in education and development research. When Abhijit Banerjee, Esther Duflo, and Michael Kremer were awarded the Nobel Prize in Economics "for their experimental approach to alleviating global poverty", the committee cited how more than five million Indian children have benefitted from effective programmes of remedial tutoring in schools as a direct result of one of their RCTs. It highlights how good evidence gathering is vital in education.⁵⁷

International organisations, such as the Commonwealth, and national governments (through their education and development budgets) should fund RCTs to help us understand the best way to teach entrepreneurship. They should model their approach on the Innovation Growth Lab, which provides funding for researchers and programme delivery organisations involved to conduct randomised-controlled trials into entrepreneurship training and education programmes.

education. The Hub connects hundreds of education policymakers and professionals from across the Commonwealth through an email-based network and occasional meetings. The online hub also collects resources such as research, reports, and guides to spread good practices.

The Commonwealth Secretariat should work with educators, organisations delivering entrepreneurship education, and governments to develop in-depth

guidance for governments seeking to expand access to entrepreneurship education. This will be important in counteracting the limited orientation to enterprising attitudes, behaviours, and skills among some teachers identified in the UNCTAD Policy Guide on Youth Entrepreneurship,⁵⁸ which was developed in collaboration with the Commonwealth.

To avoid duplicating efforts, Commonwealth nations should work, or continue to work, with the UN Industrial Development Organization's (UNIDO) Entrepreneurship Curriculum Programme.⁵⁹ The programme assists governments to develop their own curriculum by assisting with syllabuses, teacher training, textbook provision and implementation. Nations should also seek to involve the private sector from an early stage.

Angola's adoption of an entrepreneurship curriculum provides a model. The Angolan Ministry of Education worked with Chevron Angola along with other international funders, as part of UNIDO's Entrepreneurship Curriculum Programme. The initiative piloted entrepreneurship as a stand-alone subject in 45 secondary schools across nine provinces. The course, which used locally customised materials to train teachers, was shown to significantly increase students' entrepreneurial knowledge, skills, and intentions. On the basis of the evaluation the programme was rolled out nationwide to 500,000 students.⁶⁰

Recommendation 3: Create clear responsibility within education and business departments for promoting entrepreneurship education.

Changing policy requires leadership. As entrepreneurship education sits outside (or across) traditional subjects, it can often lack a specific individual with a responsibility to drive change, and as a result become de-prioritised. To avoid this happening and ensure that the entrepreneurship education agenda is driven forward, governments should appoint individuals with a specific responsibility to support entrepreneurship education. This would help combat the inadequate integration of entrepreneurship in the education system, a key impediment identified in the UNCTAD *Policy Guide on Youth Entrepreneurship*.⁶³ There are multiple advantages to this approach.

First, it sends out a signal to teachers that entrepreneurship education is considered a priority by the government. As a result, frontline educators will be more likely to reach out to entrepreneurship organisations and expand provision.

It is also important to recognise when policymakers have successfully expanded access by adopting or developing best practices. The Education Hub already recognises exceptional educators and organisations who develop cutting edge-learning and teaching projects, across a range of categories, such as rethinking education for work. They should create a further award for education for enterprise to signal the importance of entrepreneurship education.

The Commonwealth Secretariat should also use indices to drive change. For example, the World Bank's Ease of Doing Business Index, has led to governments across the world competing to reduce the time it takes to register a business.⁶¹ At the moment, there is limited scope to compare entrepreneurship education across Commonwealth nations. By contrast, the European Commission's Eurydice report provides rich data on topics such as the availability of entrepreneurship education training for teachers, how students are assessed, and whether or not entrepreneurship education is a separate subject or integrated into others.⁶²

Currently the Global Entrepreneurship Monitor's National Expert Survey only provides limited information and is not sufficient for international comparisons. The Commonwealth should work with organisations such as GEM to identify better ways of comparing the uptake of best practices across the world to drive adoption.

Teachers and schools may also be more likely to invest in professional development relating to entrepreneurship education as a result.

Second, it also ensures that there will be a voice in government who can make the case for entrepreneurship education. Without an individual with an interest in promoting entrepreneurship education in a policymaking role, there is a risk that it will become marginalised, as other subjects compete for scarce class time and funding.

To further support entrepreneurship education, the government should also consider creating entrepreneurs-in-residence. Entrepreneurs could temporarily join the education department to help ensure the curriculum stays relevant and identify opportunities for improvement.

58 UNCTAD. (2015) *Policy Guide on Youth Entrepreneurship*.

59 UNIDO. (2014) *Fostering entrepreneurial youth*.

60 UNIDO. (2014) *Fostering entrepreneurial youth*.

61 Doshi, Rush, Judith G. Kelley, and Beth A. Simmons. "The Power of Ranking: The Ease of Doing Business Indicator and Global Regulatory Behavior." *International Organization* 73.3 (2019): 611-643.

62 Eurydice. (2016). *Entrepreneurship Education at School in Europe*: Eurydice Report. Publications office of the European Union.

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CONCLUSION

Recent events highlight the value of teaching young people to be resilient and adaptable. Across the world, industries have faced unprecedented disruption and businesses have been forced to adapt. As economies recover, it will be reliant on entrepreneurs to create new enterprises and employment. In some cases, workers may be forced to retrain and change careers. Yet there has long been a need for education systems across the world to produce resilient and adaptable graduates.

Through entrepreneurship education, we can teach young people the skills to adapt as the world undergoes rapid economic change. But many young people lack the opportunity to learn about how to start and run a business. By expanding access to entrepreneurship education, we will not only support the next generation of founders and job creators, but also teach young people the mindset and skills they need to thrive in the modern economy.

“Across the world, hundreds of millions of young people express a desire to start a business, yet many are held back by a lack of confidence and information.”

Entrepreneurship education has typically taken place in universities and business schools, yet there is a strong case for acting earlier. The mental traits that are often a prerequisite to entrepreneurial success can be influenced in pupils as young as eleven. The challenge now is to ensure more young people can access high-quality programmes proven to develop those traits.

Across the world, hundreds of millions of young people express a desire to start a business, yet many are held back by a lack of confidence and information. By expanding access to entrepreneurship education in secondary schools across the Commonwealth, many more of them can fulfil their ambitions of becoming founders.

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ABOUT THE ENTREPRENEURS NETWORK
@TENTHINKTANK

The Entrepreneurs Network is a think tank for Britain's most ambitious entrepreneurs. We support entrepreneurs by:

- Producing cutting-edge research into the best policies to support entrepreneurship;
- Campaigning for policy changes that will help entrepreneurship flourish;
- Hosting regular events and webinars to bridge the gap between entrepreneurs and policymakers;
- Updating entrepreneurs on how policy changes will impact their business;
- Making the case in the media for entrepreneurs' contributions to society.

We are the Secretariat of the APPG for Entrepreneurship, which was set up to encourage, support and promote entrepreneurship and to engage with entrepreneurs; and to ensure that Parliament is kept up to date on what is needed to create and sustain the most favourable conditions for entrepreneurship.



ABOUT ABE GLOBAL
@ABETALK

ABE is a not-for-profit skills development specialist and awarding organisation providing internationally recognised learning, credentials and quality assurance in the fields of business, entrepreneurship and employability.

The organisation was founded in 1973 with a clear social purpose: to improve business education for aspiring entrepreneurs in developing countries. We now work with schools, colleges, businesses, governments and NGOs and have a network of international partners across four continents. Together we develop skills that empower individuals, support businesses, reduce gender inequality, and tackle extreme poverty. Since we started in 1973, around 1.5-million people globally have gained an ABE professional business qualification.

We care deeply about having a positive impact on the environments in which we operate. As a result, we fund and make freely available research around issues such as sustainable entrepreneurship. We are constantly updating our business education products and services to help organisations and individuals develop the skills needed to adapt to a rapidly changing environment in both established and emerging economies and, in this way, we are contributing to the development of a more skilled global workforce.



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