

**G20 Young Entrepreneurs' Alliance
Discussion Paper on**

Quality Education

Preamble

Bringing together the world's 20 leading economies, the Group of Twenty (G20) is a forum of critical international policy dialogue; one that requires feed-back from various stakeholder groups to ensure legitimacy, maintain trust and drive action. The declared objective of the G20 is to achieve strong, sustainable and balanced global economic growth. It is the long standing position of the G20 Young Entrepreneurs Alliance (G20 YEA) that attainment of this goal should take into account the transformative potential of entrepreneurship, especially among youth.

The G20 YEA is a collective of organizations across the jurisdictions of the G20 that promote youth entrepreneurship as a driver of economic renewal, job creation, innovation and social change. Alliance members represent more than 500,000 young entrepreneurs and each year, the G20 YEA brings together hundreds of the world's top young entrepreneurs to share their ideas and propose solutions to advance youth entrepreneurship.

In order to contribute concretely to the 2018 G20 policy dialogue, young entrepreneurs at the 2017 G20 YEA Summit in Berlin voted on their top three priority areas for further study and recommendation: quality education, international mobility and smart taxation. Since the Summit, the G20 YEA has led three working groups tasked with creating position papers that provide further analysis and recommendations to B20 and G20 leaders in each priority area.

Facilitated by a working group of entrepreneurs and leaders across the G20, the below position paper, created in December 2017 – August 2018, investigates the priority area of **quality education**¹.

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At the 2017 G20 YEA Summit in Berlin over 400 young entrepreneurs from the G20 countries identified quality education as the top priority for improvement by the G20:

“We call upon G20 governments to review educational priorities to ensure young people have access to knowledge and skills vital for new technological and business realities, including digital competencies, STEM education, and venture creation skills. At the same time, the education system should overcome the disciplinary fragmentation of knowledge and emphasize ethical competency as a key to understanding the complexity of the social context².”

G20 YEA has consistently emphasized the topic of education since 2013³, recognizing that it plays a key role in ensuring employability and determining the quality of entrepreneurial initiative, and, ultimately, is a key to building innovative and inclusive economies of the 21st century, where employment and welfare are no longer ensured by mass production technologies associated with low-skilled labor, but more and more by the accumulation and dissemination of knowledge, continuous innovation and development of diverse human abilities.

The new technological realities of the knowledge economy, which is characterized by the decentralization of production of goods and services, the targeting of specific consumers, the positioning of producer closer to customer, unlock unprecedented opportunities for individuals to take initiative, innovate, collaborate to create new value, and start new businesses. But, are the needed knowledge, skills, networks and access to resources being put at the disposal of those who have a high potential in the knowledge economy?

The current typical educational systems, which still represent the structures created to train workers *en masse* for the industrial monopolies and apparatus of the twentieth century, are lagging behind the new realities. They largely remain oriented to maintaining the *status-quo*, narrowing the scope of education to teaching technical skills and methods of production and administration.

To prepare young people for work in a knowledge economy it is important to focus on new requirements for education where the emphasis is not on the memorization of information or mastering of method, but rather on the cultivation of intellectual freedom and initiative⁴, on personal development, on study of new frontiers of science and technology, and on preparing and motivating students to further creative application of knowledge.

² G20 YEA 2017 Berlin Summit communique, <http://www.g20yea.com/index.php/communiqués>

³ Report for the Development of the Draft of the Final Communique, <http://www.g20yea.com/images/reports/g20yea-moscow-report-2013.pdf>

⁴ The individual capability to analyze and synthesize is directly related to the creative and imaginative search for solutions - the basis of entrepreneurial activity in a broad sense. Methods should not be taught at the expense of the study of principles on which they are based.



In the context of entrepreneurial activity, special attention today should be given to *phronesis* – practical wisdom or practical reason, which refers to the ability to make right decisions and undertake correct actions in conditions of uncertainty. *Phronesis* differs from the theoretical search for something universal (scientific knowledge) and from vocational (i.e., practical, instrumental) knowledge, but in fact needs the foundations of both. Education of character, the acquisition of ethical competency⁵ and moral independence must again become an important function of education.

In the knowledge economy, the practice of production incorporates the practices of research and development. It thus requires constant horizontal interaction of research and educational institutions with economic agents, making knowledge centres (universities and /or alternative educational institutions) an optimal place for concentration of programs that aid business innovation and foster youth entrepreneurship.

Educational systems are facing a number of challenges that impact their transformation:

- **The need to improve the quality and depth of education.** Prevailing curriculum and teaching methods do not anticipate new demands that the knowledge economy sets on individuals. Inadequate or outdated standards and performance metrics exacerbate the problem by limiting the ability of educational institutions to freely innovate with the content, methodology and structure of their programs.
- **Online education** is often seen as a tool for democratization and personalization of higher education, and for lower costs. But, these are outcomes, which it cannot deliver: online education cannot substitute traditional offline higher education. However, online tools provide an optimal pathway to facilitate and support “life-long learning”, by offering digital means to augment one’s current education with accessible and customized training.
- **Proliferation of players in the educational sphere** due to a growing volume of cutting-edge industry expertise and applied knowledge that is being accumulated by a wide range of economic agents. Effective interaction and cooperation among all stakeholders to ensure use of this knowledge for the purposes of professional education can be enabled by digital technology and tailored incentives, including financial.
- **Increasing global cooperation and competition.** While the benefits of international networks and cooperation for educational institutions are evident, national educational systems that are slow to adapt and embrace innovative approaches will be facing increasing drain of talent, worsening marginalization of their economies.
- **Technology and coding focus.** A number of coding schools are being created around the world putting technologies at the centre of education. Even if we see it as an essential point, this also may be a challenge as education shouldn’t be fully associated with technology only. Technology should be the primary way/tools for a better education, but

⁵ Ethical competency underpins the ability to evaluate public life, through which a person (entrepreneur) can correctly formulate a problem, choose direction of research and its method, formulate options for action.



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shouldn't be the sole purpose of it. History, Geography, Arts, etc., as well as technology should all be part of a better and quality education system.

- **Introduction of digital technologies in the educational process.** Free and instant access to information, teaching and assessment tools and resources has the potential to profoundly change the role of teacher/educator in the educational process, increasing the demands on their professionalism and enabling them to better engage with students.
- **Qualification of educators and teaching materials.** The rapidly changing requirements of industry to qualifications and skills of employees, and the changing role of teacher/instructor in the educational process are putting additional pressure on educators to be up-to-date with the technological progress in their field.
- **Disconnect between education and industry.** While initiatives to better link education and business abound, the systemic problem of disconnect still persists. The advent of intelligent systems and technologies (such as artificial intelligence) is expected to accelerate shifts and imbalances in the labor market, causing the heightened urgency to rapidly adapt the education and skills base.

Given the role of public regulation and budgets in framing and funding of the sphere of higher education, governments, in comprehensive consultation with society, need to determine goals of transformative action and policies that are the best fit. **We suggest discussion of the following measures.**

Education for knowledge economy – recommendations:

- Review educational priorities to ensure young people have access to knowledge and skills vital for the new technological and business realities of the 21st century.
- Prioritize study of principles and methodology over mastering of particular method(s).
- Promote project-based approaches to foster intellectual freedom and initiative, build experience and develop such important skills and abilities of students as critical thinking, creativity, problem-solving, handling complexity, collaboration and communication with others.
- Encourage multi-disciplinary approach, for example, through creation of optional elective intra-university courses, allowing students to get knowledge in other fields: for students of economy – in computer, chemical, and other science and technology fields, for students of technology – in the sphere of history, economy, law, etc.
- Strengthen relationship of education and R&D with existing companies and organizations through applied student research, joint participation of professors and students in business projects and start-ups, and formation of professional networks of entrepreneurs, experts, educators, students;
- Foster a culture of cooperation and trust by augmenting professional knowledge and skills of students with broader cultural values and ethical competency that could be gained through study of arts, humanities (either as main courses or as supplementary



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programs) and interaction with experienced people in diverse educational and social settings.

- While education is traditionally organized and coordinated at the national level, consider the potential for global educational benchmarks in STEM subjects. Harmonization of standards, where possible, could provide for cross-border acceptance of qualifications and allow for better international mobility of talent.
- Create better conditions and frameworks for international cooperation in the field of education, the expansion of scientific exchange, as well as the use of digital technologies and networks of educators and students for the exchange of research results, teaching materials and techniques.

Education to provide networks, innovation and entrepreneurial skills – recommendations:

- Support creation of intra-university courses that augment one's education with knowledge from other fields. Students of humanities should have access to courses in computer, science and technology fields, and vice versa.
- Facilitate promotion of an entrepreneurial culture through all layers of the schooling system, with a focus on the values of ethics and business morals.
- Develop standardized enterprise development programs, which include widespread training in basic entrepreneurship and risk management skills, and utilize Internet to deliver quality information resources.
- Support creation of specialized business and social networks (local and international), and technologically advanced business centers at universities, giving students access to skills and tools necessary to put theory into practice, including incubation services and co-work spaces, low-cost search for information, professional services and other resources for start-up initiatives.
- Create incentives for cooperation between education providers and businesses to better link educational pathways with labor market needs, and to effectively support and provide guidance to students in their career choices and job search.
- Expand work-based learning systems such as internships, apprenticeships/cooperative work placements and vocational training, both in scope and in depth, to include applied research and PhD projects and special incentives to encourage the engagement of SMEs.

Conclusion

This paper attempted to summarize the most obvious and near-term challenges of education pertaining to the need to develop private initiative and entrepreneurial potential of youth. But, bigger questions remain. Throughout history, quality education has been the privilege of relatively small elite, only slowly penetrating lower layers of society. The majority was always preoccupied with physical or relatively low-skilled labor.



Today, we face a situation where not just physical labor is being replaced by automation (this is not a new phenomenon), but any labor, even highly-skilled, that can be described by a mathematical or logical formula is at risk of being displaced by machines (robots) or computer programs. People and societies must grapple with this new situation.

In which form and to what extent can entrepreneurship be an answer? How can the quality and reach of education be increased, so that people are equipped to devote themselves to new tasks? This problem has generational scope, and, to further complicate it, needs to be solved in a historic situation that is characterized by a number of structural variables and predicaments, such as:

- technological breakthroughs that enable automation of routine functions and tasks on massive scale and thus threaten to make an unknown portion of current jobs extinct; furthermore, the forecasts of skills that will be in demand in the future and the speed with which they will change are dubious;
- excessive and complicated taxation and regulation of wage labor that further incites employers to replace labor by machines (robots);
- depreciation of huge capital stock in “traditional” industries with the advent of new, more effective, technologies, leaving whole communities that depend on it vulnerable to economic instability and stagnation;
- public pension and social security systems crisis;
- growing social inequality that threatens to lead to more social tensions and serious political crises.

The human mind is the only thing in the universe that creates and sustains development and progress. Today, innovation (in its many facets – social, organizational, technological) comes to the fore as the primary source of socio-economic development, because other historically significant sources of growth (colonization of free land and extensive exploitation of natural resources, population increase) exhausted their potential by the XXth century.

If a way for providing access to opportunity in a knowledge economy through better education (coupled with infrastructure and economic law whose content should be consistent with the content of economic life) is not found, then societies might be unable to escape prolonged stagnation or, worse, a period of social, political and economic chaos.

Appendix

Examples of programs and projects that aim at implementing new approaches to education for the new technological and business realities follow in **Appendix 1** (to be expanded).

APPENDIX 1

1- **ABC PROJECTS** (Academia-Business-Cooperation) is a pilot initiative that was launched in St. Petersburg, Russia in 2014, as a first attempt at practical implementation of ideas that emerged in the course of academic consultations held during preparation of the Moscow 2013 G20 YEA Summit communique.

ABC PROJECTS aims to create professional community in digital format, whose members could cooperate to solve problems in conditions of uncertainty. ABC PROJECTS also records and posts online lectures of its offline educational program that aims to address the deficit of students' knowledge of philosophy and history.

The initiative already unites students and educators from 25 universities of Russia (including St. Petersburg, Moscow, Rostov-on-Don, Nizhny Novgorod and Yaroslavl). Online audience of video lectures has passed the 200,000 views mark.

But, more importantly, the approach pioneered within ABC PROJECTS attempts to integrate, in an optimal way, achievement of several important goals:

- Build trust and understanding among participants with different educational and professional backgrounds, in order to form the basis for a professional digital community uniting students, academics, educators, entrepreneurs, professionals and experts.
- Implement multidisciplinary approach to solving practical problems of economic agents. The wide variety of challenges that were posted to participants since 2014 encompass technical, financial, architectural, technological, IT, marketing and other spheres.
- Bring students into hands-on projects during their course of study, to help them with professional career choice, build portfolio for future employment, get practical experience in subject matter, and acquire skills needed for project-based teamwork.
- Build infrastructure for open innovation, accessible to economic agents of all types and forms (entrepreneurs, SMEs, socially-oriented organizations, municipalities, etc.).
- Provide an opportunity for educators to get feed-back needed to correlate educational activities of their universities with technological and business developments.
- Balance offline consultations with online formats of work; practical tasks with humanitarian educational program.
- Enable cross-border cooperation with universities and entrepreneurs from other countries.

ABC PROJECTS initiators are St. Petersburg University of Economics, Institute for Facility Management and Center for Entrepreneurship LLC.

Website: www.wolframcenter.ru/abc

YouTube channel: <https://www.youtube.com/channel/UCNv9EIH-k-eoQxR-5VVm8Aw>



2- C21 Canada

Canadians for 21st Century Learning and Innovation (C21 Canada) is a national, non-profit organization that advocates for 21st century models of learning in education through initiatives dedicated to creating “a 21st century learning vision and framework that inspires Canadians, reflects Canadian values, and provides leadership in achieving the goal of accelerating the pace of the changes required.” 14 Education leaders, such as those participating in C21 Canada initiatives, see digital learning environments as key to delivering effective education in the 21st century.

The programs are based on:

- Personalized, adaptive and blended Learning
- Virtual/Online Learning
 - **LearnNowBC (LNBC)** : To support distributed learning across British Columbia, LNBC provides free online services for K–12 students, adult learners, educators, and parents through their web-based portal. Blackboard Collaborate, an online web conferencing platform, is licensed for use until June 2017
 - **Alberta Distance Learning Centre (ADLC)** With campuses located in Barrhead, Edmonton, Calgary, and Lethbridge, the ALDC has a long, successful history as a leading distance education provider in Canada.
 - **eLearning Ontario:** The Ontario Ministry of Education manages all distance education programs offered across the province. Although each school district manages enrolment, online courses are delivered by the province through eLearning Ontario. The LMS platform for delivering all courses is Brightspace by D2L.
 - **New Brunswick Distance Education:** In New Brunswick, secondary school online courses are locally developed and conform to the curriculum guidelines developed by the Program Development Department. Print textbooks are available to students taking the online courses across the province. Instruction is delivered through Brightspace by D2L and the courses consist of lessons and assessments developed by teachers

Website: <http://c21canada.org/>

[Digital Trends and Initiatives in Education In Canada](#)



3- UK examples

Learning and Work Institute is an independent policy and research organisation dedicated to lifelong learning, full employment and inclusion. They believe a better-skilled workforce, in better-paid jobs, is good for business, good for the economy, and good for society.

<http://www.learningandwork.org.uk/>

Nesta is a global innovation foundation. They back new ideas to tackle the significant challenges of our time. Using their knowledge, networks, funding and skills, Nesta grows new ideas that can change the world for the better, applying their methods in priority fields where there are significant challenges: health; education; government innovation; the creative economy, arts and culture; and innovation policy.

<https://www.nesta.org.uk/>

Enterprise Bootcamp is a pioneering programme to equip young entrepreneurs with the tools to start up their business/projects/enterprise. It provides young people with a **ten week accredited enterprise programme**. It is designed to be approachable in a language that focuses on developing confidence and the technical suite of skills required to start up a business. The programme has been developed by Bootstrap & Peabody over a number of years, with master classes that cover the core elements of a 'business plan' and are accredited by Peabody with an OCN Level 2 business qualification.

<http://www.bootstrapcompany.co.uk/bootstrap-campus/enterprise-bootcamp/>