

Education, The Future of the Labour Market and Youth Skills

A POLICY PAPER FOR THE G20

Executive Summary

The future of the labour market is a constant debate - but while there are opposing attitudes on what it will look like, there is consensus that education systems need to prepare children for uncertainty and a changing productive landscape. Employers routinely highlight a significant skills gap between the skills they desire and the outcomes that educational institutions currently deliver. This is compounded by youth unemployment, which limits peoples' ability to learn on the job, and often deskills youth at a critical time as they transition to adulthood.

Innovation has continuously reshaped the employment landscape since the First Industrial Revolution, as we enter the Fourth Industrial Revolution, technological breakthroughs and global competition are ushering in jobs we couldn't have imagined even a decade ago while, at the same time, displacing or shuttering entire industries. Early deindustrialization – a leapfrogging of the Western agriculture-manufacturing-services pathway exacerbates this problem, with automation of lowskilled work limiting options for many young children.

Education systems are only recently transitioning away from a knowledge-based curriculum to one that values competencies, with high-stakes national exams prioritizing the ability to perform repetitive tasks and memorize facts over curiosity, creativity, and confidence. Even among G20 Ministries of Education and within systems that are modernizing curriculum, adapting learning approaches, and improving responsiveness to the needs of employers, most still struggle to sync their content with the real-time needs of the workplace, given exponential rates of advances in technology and automation.

Designing education systems, and supporting others to design systems, to match these challenges is of growing concern within the G20 given the sheer number of youth across the globe, and the societal pressures created from high levels of youth un/ underemployment, and migratory pressures from those who can't find work at home. Given the global nature of modern economies, Governments must work together on this issue. This policy paper recommends the following actions to be considered by the G20 Education Ministers:

Recommendations

- The G2O should work to ensure that their curricula provide all children with the knowledge and foundational skills they need to learn; in a way that promotes social and emotional skills valued by employers.
- The G2O should reinforce the value of softer skills through improved measurement. This will raise the profile and importance of core skills.
- The G2O should employ a long-term view when designing education systems. Children in school now will be working until 2070 and their education will need to reflect future needs.
- The G20 should involve employers in curriculum design, jobshadowing, mentorship in schools, and teacher training, to facilitate alignment of their needs with the complete system.
- The G2O should work to improve options ensure that youth keep their skills active during the transition to the workforce.

Background

The current cohort of global youth is the largest in history: half the world population is under 30 years old, with over a quarter under the age of 15.¹

According to the International Labour Organization, roughly 40% of 15- to 24-year-olds are unemployed or have a job but live in poverty, while 300 million children live on less than two dollar (US) per day.³

Almost a third of youth in low-income countries have no educational qualifications, with many not grasping basic skills even when in schools. By 2030, over half of global youth totalling more than 800 million young people—will not have the opportunity to develop the basic skills they need for employment, including simple reading and mathematics.⁴

Education matters in the labour market – and rates of return to investments in schooling have been estimated since the late 1950s. Recent attempts to summarize the last 60 years of evidence found that the relationship is remarkably stable, with the returns being higher for women than men; increasing with the level of education; and increasing in combination with experience. That is, education increases productivity, and the more educated you are, the more your experience can increase this further.

The structure of economies is changing, with the traditional growth path envisaged by economists in the 1960's not occurring in many countries. This vision was of a rise of an industrial sector at the expense of agriculture, the growth of urban relative to rural areas and the rise of factory based wage employment, and matched the education systems well – where the education system provided workers with



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minimum skills, some specialization if needed, but the majority of the work was low-skilled, low value, with productivity increases through technology allowing increased industrial output which could increases wages and lift people out of poverty. While this seems to hold, in part, for the larger developing countries, notably India, China, Bangladesh, a whole raft of countries in Latin America and Sub-Saharan Africa do not fit this mould. Equally, as economies shift away from large factory-based manufacturing, the number of low-skilled entry level jobs has diminished, leading to higher youth unemployment rates.

The G2O has committed to SDG Goal 4 which has the aim of primary and secondary inclusive quality education for all by 2030. This is a hugely ambitious goal, with many children still excluded from secondary education, and up to 250 million children in primary school but unable to read or do simple mathematics. As such, there is an urgent need to solve this learning crisis and ensure that all children enter the labour market with the basic literacy skills to learn further skills. For employers, if their staff lack basic literacy they are reduced to training employees through intensive methods; with literacy, a wide range of technology can be used to increase their productivity. This learning crisis is confounded by the fact that basic skills are not the only pathway to employment, with, as highlighted in previous sections, softer and inter-personal skills required for jobs in services. This creates a secondary challenge for systems – how do they ensure all children get the foundations needed, but in a way that promotes the softer skills necessary?





The international community, and the G2O, has explicitly included skills within the SDG's, with SDG 4.4 seeking to; "substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship". This commitment to youth skills and the future of the labour market recognises the import of education for economic and human capital improvements as well as poverty reduction and should be echoed in the policies of the G2O, both as advocates for and leader in, education.

This matters for the G20, who face several challenges ensuring their education systems can enable youth to successfully enter, and grow within, a changing labour market. High levels of youth unemployment place economic and social pressures on G20 countries and undermines the ability of future adults to adapt and thrive using new technologies. Potential automation of middle-skilled jobs creates additional issues, increasing the burden on welfare states which are also stretched by aging populations.

Outside the G20, there is an opportunity to take leadership in helping to harness the demographic dividend offered in developing economies. The World Economic Forum's recent report⁵ on the future of jobs and skills in Africa highlighted some key structural trends in that region which are pertinent – firstly, the labour market, in terms of numbers, will expand, with increasing numbers of children completing primary schools. Secondly, a substantial number of jobs are at risk of automation, with estimates of two-fifths to a half of work activities being at risk in South Africa, Ethiopia, Nigeria and Kenya. This is likely moderated by comparatively low labour costs, which again is a concern for poverty reduction.

A combination of automation and low levels of manufacturing, combined with an overreliance on primary commodities in exports, means that issues in the labour force in Africa are likely to become more challenging in the coming years. For many, informality is an issue, with most employment being in agricultural or informal sectors, rather than regular wage formal work. Given the youth bulge, migratory patterns and climatic shocks, this region is likely to be of growing importance on the world stage.

While there is no agreement on economists or public commentators on the future of economic production, which links heavily to the labour market, we attempt to identify some key trends and patterns that matter for the G20.

Key Issues Under employment/ Unemployment

The future of employment is intrinsically linked to the structure and health of economies. Ensuring workers have jobs often ensures that they do not live in poverty, though if wages are low there is no guarantee this will be the case. The quality of work, and the productivity of workers within their jobs, is as important to reduce poverty – for example, in China, the labour force has remained largely constant in the last ten years, while GDP per capita has increased fourfold, lifting millions out of poverty.

A large share of the world's youth are yet to mount the first hurdle, and are still out-of-work. Even in high-income economies like the European Union, nearly one in five people between 15-24 are unemployed, with rates in recent years being as high as 55% in Greece in 2013. In the Middle East and North Africa this figure is nearly three in ten, and while rates are lower in Sub-Saharan Africa (at 15%) this is often due to low-value irregular work, with many not being able to afford to stay unemployed.

In G2O countries, this generation of young workers faces a dangerous mix of high unemployment and increased inactivity in the key years after education, which can lead to a deskilling of both knowledge and softer skills. A recent study of young people living a number of EU countries found that working in "deskilled" jobs—that is, positions in which the worker does not use the skills he or she has trained for—leads to lower job evaluations and poorer job prospects in the future.⁶

Those who are working are often under-employed (having insufficient paid work or doing work below their skill and ability level), or in working poverty. Young people in the developing world face persistently elevated levels of working poverty. Meanwhile, employers struggle to find workers. ManpowerGroup's recent survey of nearly 40,000 employers in 43 countries found that 45 percent say they can't find the skills they need.⁷



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Foundational skills

Effective foundational skills – in particular, literacy – is critical in providing a solid base for all young people to succeed in later education and in turn into the labour market. In many developing countries, such foundational skills are not being achieved - according to one recent study of literacy in 51 developing countries, about 50% of women who reached Grade 6 left school unable to read a single, basic sentence⁸, and the World Bank has estimated that there are 125 million children globally who are not acquiring foundational literacy or numeracy even after spending at least four years at school⁹. This then feeds into a poorer quality labour market, with large numbers of working age adults in some developing countries being functionally illiterate or able to read simple sentences at best. Such an issue is one of efficiency, and also of equity – and will hold profound consequences for the future of the labour market and youth skills. As the World Bank go on to set out:

"While these skills gaps exist in all countries, their magnitude is greater in developing countries, with an estimated 92 million."¹⁰



Alongside recognising the shift in labour markets and the need to prepare all young people for the future of work, a focus on solving the long standing and widespread foundational skills crisis should be a priority for the G20.

A skills mismatch

This is not just academic skills. Half of employers say that communication skills—both written and verbal—are the skills they need most but cannot find, followed by collaboration and problem-solving skills¹¹. In order to address this dissonance it is important that employers are involved in the shaping of a curriculum for employment.

Children who enter school systems now will be working until 2070, which means we cannot possibly give them now all the skills they will need throughout their careers. It is imperative, therefore, that the G2O focus not just on the content of education but teach children how to learn – giving them the ability to continue to learn and reskill throughout their lifetimes. The G2O can lead by example, and then support countries to take this shift into account when designing education systems—taking a longer view of what skills will be required and how much continuous learning will need to happen long after students have left school. Countries that have done this, such as South Korea, have benefited from an integrated system which has improved over time, allowing them to adapt with the markets and opportunities.

Learning to learn

The Organisation for Economic Cooperation and Development¹² (OECD) and the WEF's Closing the Skills Gap Project¹³ argue that the convergence of globalization, digitalization, and demographic changes have reshaped the skills required for future work. With informality and a move away from a longterm manufacturing labour force means young people, school systems must be equipped to adapt to the changes in the labour market to take advantages of opportunities. For the G20, this means a move away from schools teaching specific knowledge for tasks, to helping children and youths learn how to learn giving them the capabilities to continually acquire new knowledge and work with others.

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This is not new, with a recent Brookings report finding that "there is recognition by education policymakers that, in order to equip children with the ability to succeed in today's rapidly changing world, students need to be taught a breadth of skills beyond numeracy and literacy"¹⁴. This could include, as identified by the global Learning Metrics Task Force, competencies ranging from collaboration to scientific reasoning to digital literacy (see Paper 4 for further recommendations on digital literacy)¹⁵. In "Skills for a Changing World", Brookings undertook a scan of 102 countries, to ascertain the breadth of skills that were including within their policies and curriculum. They found that the majority of countries identified a wider range of skills in their visions, but this range narrowed when looking at the actual documentation and curriculum. The most popular skills were communication, creativity, critical thinking, and problem solving.

They conclude that the need to focus on a wider range of skills has been underway for some time, at least in the rhetoric of education systems, but more needs to be done to ensure this rhetoric translates into classroom practices.

This is a continual theme in the discourse around what children need to learn and is supported by large companies. In "The Future of Jobs" report from the World Economic Forum, social skills like persuasion, emotional intelligence, and mentoring skills are predicted to more important to employers than narrow technical skills¹⁶. ManpowerGroup's Skills Revolution report revealed similar findings, that employability depends on people's ability to learn, rather than their current learning levels (though the two are linked).¹⁷

A recent McKinsey Global Institute study on skills in the age of automation also argues that the future workforce will spend more time on activities that machines are less capable of, such as managing people, applying expertise, and communicating with others. The skills and capabilities required will also shift, requiring more social and emotional skills and more advanced cognitive capabilities, such as logical reasoning and creativity¹⁸. Finally, an experiment by Google's Project Oxygen¹⁹ found that the skills that top managers needed to succeed at Google were softer skills - trust, communication (especially listening skills), vision, productivity.

Social and emotional-learning (SEL) skills are equally critical to students' future success on the job, giving students the tools through which they understand and manage their emotions, develop positive relationships, and feel empathy for others.²⁰ Students getting SEL training may also learn to maintain healthy relationships, set goals, and make good decisions for themselves.

In addition to improving social and emotional learning, several organizations also seek to provide training in universal values; that is, moral reasoning and ethical skills. Ashoka, for example, combines empathy, leadership, and team-building with social entrepreneurship,²¹ resulting in alumni who are inspired changemakers. In the same way, the Global Education & Leadership Foundation (tGELF) has developed a curriculum that prepares young people to become ethical leaders.²²

Automation

The impact of technology on labour markets has been the subject of many discussions, from the Luddites to modern day strikes in London resisting driverless trains. For the G2O, the key point is to understand not if technology will disrupt labour markets, but how the balance between technology creating jobs, and technology destroying jobs, will play out. This will depend, in part, on the nature of the technology, and if it helps workers become better, or can replace them completely. To the extent it works to improve individual (or team) productivity, it can have positive impacts in both the short and long term. Where technology can displace labour - automation of tasks, it can cause higher unemployment in the short run. This is combined with discussions around skills, and the structure of industry.

The 'internet of things', including cloud computing, big data and machine learning, creates a threat to jobs for middle-skilled workers, which places young people, who lack experience, at a disadvantage. While technology has always threatened low-skilled jobs, recent advancements in AI mean that typically whitecollar roles can now be automated, with some²³ argue that this can create inequality as low skill workers struggle to adapt. Where the workforce is highly gendered (for example in Australia where men work in construction, mining and manufacturing; women work in education and healthcare services), this can create disproportionate pressures, especially on young men. Many G20 countries are already experiencing this phenomenon²⁴, which can lead to increasing disguiet among populations.

The ability of workers to compete with automation is handicapped by low-performing school systems, with many developing countries struggling to equip children with the basic foundations of reading and simple mathematics. This severally limits labour in the race against technology. For low income countries, having low-skilled workers with low wages may no longer be a sufficient comparative advantage to attract investment and fuel growth.



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Informal labour markets and the 'gig' economy

The productive environment, and how countries can improve this, is key to improving prosperity. For many countries and youth. particularly those in low and middle-income economies, increasingly the options are in informal labour markets. Even for G2O countries, formalization of the labour market is a continuous challenge²⁵, as highlighted in the ILO report on the Future of Work in Latin America, where half of people are working in informal conditions. In high income countries, informality, or the 'gig' economy, is also of growing importance, with substantial changes to the structure of working conditions, which can be both a positive, and a negative trend. New models of enterprise, and the rise of matching platforms can improve opportunities for self-employed workers on one-hand, and reduce formal rights on the other. This is a step-change from the traditional, 'job-for-life' model of long term employment with a large organization equally, outsourcing, temporary work, all are examples of disruption to the labour force.

Entrepreneurship skills-both developing an entrepreneurial mindset and having the skills to start and build a business-are part of the European Entrepreneurship Education NETwork (EE-HUB), which drives entrepreneurship education throughout the European Union. Developing these skills has been shown to provide tremendous benefits across the spectrum of education, life skills, and business acumen²⁶. The Entrepreneurial Skills Pass has spread to 29 countries across Europe with a micro-credential for demonstrating that young people have attained these skills. In developing countries, the need for these skills are greater due to the lack of formal job options. INJAZ Al-Arab, for example, has implemented entrepreneurship skills programs for youth in the Middle East and North Africa.²⁸

Rethinking traditional pathways

The G2O should explore possibilities to learn lessons across their different systems of education, with options being available to develop both traditional and softer skills through alternative models. Job shadowing and apprenticeships have been used in many countries to help get students labour-market ready. In addition to giving experience, they have been shown to help students develop the self-belief that comes from early experiences with the workplace and access to potential role models. Unlike a classroom experience, where the adult-student ratio is high, job shadowing and apprenticeships are often set up with a 1 to 1 ratio.

Similarly, programs that provide access to role models, mentors, and business volunteers enable young people to meet others with similar backgrounds who provide positive encouragement and serve as living examples of what is possible. This focused time with a self-effective role model has a life-long impact on a student's belief in him- or herself.²⁹ JA Worldwide reports the expansion of job shadow programs to over 89 countries, learning by doing programs to over 110 countries, and youth innovation and entrepreneurship programs now being implemented in all G20 countries.³⁰

Countries are also exploring alternative models of learning, particularly for poorer adolescents, for whom working is a necessity rather than a choice. Countries like India and Bangladesh are exploring innovative combinations of job-training combined with foundational skills – shifting away from traditional technical and vocational training course in areas such as mechanics or hairdressing. Tinkering Labs are being established by the Indian Government throughout the country, including outside major urban centres, providing an alternative setting for learning



and access to 3D printers and other technology.³¹ East Asian tigers, such as South Korea, have long histories of alignment of their system reform with sectoral strategies for skills development, with close cooperation between industry and institutions for vocational training. TVET is often the poor relation of the academic pathways, and not grounded in the realities of local economies.

Overall, it is difficult to say how the labour markets will look in the future, but the Youth Bulge in Africa, informality and the move away from traditional opportunities in manufacturing for low skilled workers are key themes. Given these unknowns, we believe that the G2O should instead focus on working to create education systems can help produce youth with the foundations and skills to adapt.

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Recommendations

Building on this, we make the following recommendations to the G20:

1. The G2O should work to improve the breadth of skills children learn to allow them to be technology-shapers

The G2O should work to ensure that their curricula provide all children with the knowledge and foundational skills they need to learn; but do so in a way which promotes the inter-personal and creative skills valued by employers and which are needed to provide services or take advantages of technological change. This is essential to future proof their workers against automation and ensure they can be withstand changes in the economic landscape. This may require curricula change in some countries and such changes should be brought in carefully over time to ensure that systems have the capacity to manage such change.

2. The G2O should show leadership on the development of tools to improve the measurement of softer skills.

Reinforcing the value of softer skills, particularly empathy, creativity, and self-efficacy, through improved measurement should be a priority for the G20. This will raise the profile and importance of core softer skills valued by employers. Employers find it difficult to identify workers based purely on certificates of knowledge, creating a signalling problem, which often promotes inequality. The Learning Metrics task force has identified this as an issue, and attempts should be made to support this and other initiatives to improve our ability to integrate these measures into system diagnostics.

3. The G20 should work with their colleagues, and countries they support, to develop longer term visions of skills and education reform

The G2O should employ a long-term view when designing education systems with the understanding that those in schools now will be working until 2070

and their education will need to reflect future needs. Countries need to take this into account when designing education systems and take a longer view of what skills will be required and align their reform efforts across all areas of education to these. Countries which have done this, such as South Korea, have benefited from an integrated system which has improved over time, allowing them to adapt with the markets and opportunities.

4. The G2O should facilitate partnerships to ensure that employers voices are heard in the design of all parts of the education systems, not just on TVET

While there is often a focus on ensuring employers are consulted on TVET courses, there is very little attempt to ensure employers are involved in education systems. The G2O should involve future employers, big and small, in curriculum design and teacher training, to facilitate alignment of their needs with the complete system, not just the end point.

5. The G2O should work to ensure that youth unemployment, and under employment, does not result in skill depreciation at a crucial time.

Ensuring that youth's keep their skills active is a pressing social and economic problem for G2O countries to address. Successful examples include careers advice in schools and direct subsidies for youth employers. Unemployment, or underemployment, is not just a short-term challenge. It also has an impact on youth's skills, and their ability to find work in the future. The longer someone is unemployed, the more difficult they find it to re-enter the workforce. In developing countries, many cannot afford to be unemployed, and as such get stuck in low productivity, low wage work which can become a vicious cycle.

Acknowledgements & Endnotes

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