

# Bridging the Education- Workforce Divide: Strategies to Meet Ever Changing Needs and Mitigate Future Inequalities

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## Abstract

*To build the workforce of the future and diminish future inequalities within and among countries, educational systems must close the Education-Workforce Divide. In other words, they must integrate unforeseeable social and work demands into schools' practices to ensure that students, especially those from impoverished backgrounds, develop the skills<sup>1</sup> to participate in their economies and democracies. In this context, equal emphasis must be allocated to competency based curriculum reforms, teacher professional development and evaluation mechanisms so that G20 countries can bridge the Divide and meet the needs and aspirations of the children of the future in a timely and equitably fashion.*

## Challenge

Recent G20 communiqués of 2017<sup>2</sup> have addressed key issues related to the future of work, specifically issues related to digital innovations and labor market transformations. Yet, little attention has been given to the supply mechanisms responsible to build the needed competencies and skills to address the transformations in labor markets and society i.e. school systems.

The Education-Workforce Divide is characterized by two factors. Firstly, it is characterized by school systems' paucity of malleability to adapt policies and practices to new societal demands, and thus equip students with a different bundle of skills to solve the multifaceted challenges of today's world and contribute to their communities. Secondly, the divide is characterized by unprecedented labor market developments resulting from novel trends such as automation and technological advancements.

On one hand, with comparative data from instruments such as PISA (Programme for International Student Evaluation), one observes that many nation-states are still learning how to implement the needed reforms. Compensatory measures to create malleable school environments where children are able to learn and, more importantly, to apply basic and high-order cognitive skills, as well as socioemotional skills, to solve complex problems in unfamiliar settings, should be a priority of reform.

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1 We refer to skills as the set of cognitive and social emotional attributes that one person develops over the life cycle to successfully perform activities, complete tasks, and contribute to society either collaboratively or individually.

2 [http://www.g20-insights.org/policy\\_area/future-of-work/](http://www.g20-insights.org/policy_area/future-of-work/)

For instance, only 28% of students in OECD countries are able to solve straightforward collaborative problems (Guria 2016). Likewise, since 2009, the proportion of students who attain the basic level of proficiency in reading – which is key to comprehend the world, communicate effectively and develop other competencies – has stagnated in OECD countries. This suggests that school systems have not fully created nurturing environments for skill-development and that schooling is not meeting the needs of the youngest members of our global community to build and hope for a better future.

On the other hand, technological changes promote labor market disruptions that widen the very Education-Workforce Divide, creating further challenges for democracies as a result of higher inequality rates (International Labour Organization, 2018). Although it is unclear how much disruptions one should expect from these shifts, certain estimations point to a 60 per cent job automatization by 2030 (Balliester & Elsheikhi, 2018).

The Education-Workforce Divide currently affects youth and children and may become a greater pressing issue for G20 countries in years to come. The global youth unemployment rate was 13.1 percent in 2017 (International Labor Organization, 2017), and three out of four youths who were employed worked in the informal economy (International Labor Organization, 2017), which may increase the vulnerability of the poor due to a paucity of safety nets (World Bank, 2013, p. 129). Moreover, according to International Labor Organization estimates, more than one-fifth of youth are not employed or developing any kind of educational or training activity (ILO, 2017). Together with unchangeable school systems and rapidly changing markets, such estimations may skyrocket and create unforeseeable social and economic challenges for G20 societies and democracies.

Recognizing that labor market disruptions will continue to shape G20 economies, that the transition from school to work may become increasingly difficult, and that policymakers have the capacity to craft educational policies to support school systems to become malleable and prepare students to deal with such complexity, this policy brief draws recommendations for G20 countries to tailor and improve curriculum redesign processes, teacher professional development, and evaluation mechanisms.

## Proposal

Basic education is one of the few paths that vulnerable children have out of poverty (World Bank 2013). Thus, G20 countries must ensure that children and youth, especially vulnerable ones, have opportunities to acquire and develop different bundles of skills for citizenship and work during Early Childhood, Primary and Secondary Education. To accomplish this, it is pivotal that school systems become

malleable and implement timely policies to prepare students to contribute civically and economically to their communities.

It is in this context that curriculum reforms and teacher professional development become central to close the Education-Workforce Divide. With the support of high-quality resources in schools - especially a curriculum that is able to develop the whole child through teacher professional development tailored to developing skills - children and youth may become more likely to deal with the complexity of today's and tomorrow's world and actively contribute to the advancement of G20 economies and democracies.

On one hand, the curriculum establishes the kinds of knowledge and skills to be mastered for civic and economic participation, as well as the types of activities that children and youth may experience during their school life cycle to develop these same skills. On the other hand, teacher professional development prepares teachers to bring this curriculum to action and foster these competencies equitably in classrooms.

However, curriculum redesign processes can be treacherous and teacher professional development mechanisms diverse, which may not always lead to the expected outcomes. Moreover, incongruent and divergent evaluation mechanisms may hinder the process of collaborative learning across G20 countries.

Consequently, supporting functions must be in place to guarantee that curriculum is designed to avoid content overload while ensuring the quality of content and equitable implementation, in addition to meeting society's social and economic needs in a timely fashion. Moreover, teacher professional development must be aligned with national and subnational curricula, providing teachers with time, teaching resources and space for collaboration to hone teaching practices that can truly enhance and shape students' knowledge and skills, in addition to evaluation mechanisms that can inform such practices across G20 countries.

### **Vision for School Malleability: Aligning and Fostering Curriculum Redesign Processes, Teacher Professional Development and Evaluation Mechanisms.**

As discussed in the challenge section of this policy brief, labor markets, technological and societal advancements are ever changing. For school systems across G20 countries to truly support students' development, it is pivotal that G20 countries create curriculum committees and assign them to each International Standard Classification of Education (ISCED) level, specifically levels 0-3, which corresponds to

Early Childhood, Primary and Secondary Education. ISCED Curriculum Committees should work in partnership with teachers, labor unions and the education sector and convene periodically to ensure that they are providing a cohesive educational experience for skill-development and learning across all levels of education.

To institutionalize this work, these committees could be set permanently within the Ministries of Education. Each ISCED Curriculum Committee could have sub-committees responsible for at least one stage of the institutional learning cycle shown below, which allows for ongoing learning. This cycle is comprised of:

#### LEARNING CYCLE MODEL



- 1) Mapping, benchmarking, curating and designing curriculum;
- 2) Implementing curriculum and teacher professional development initiatives;
- 3) Evaluating curriculum and teacher professional development initiatives.

Successful models of implementation, accounting for countries' contexts, could be documented and shared as part of G20 approach to skill-policy development along the years. Below, we describe how these ISCED level subcommittees could operate to support school systems as they become more malleable and meet the needs of students entering school systems.

### 1. Mapping, benchmarking, curating and designing curriculum

Organizations such as the OECD have already identified the desire to map market needs, societal and technological advancements to guide skills policy (OECD, n.d). G20 countries could benefit from this inter-ministerial strategy to inform education policy by using data from resources such as the Survey of Adult Skills (PIAAC). With the mapping of skills, the subcommittee can align the curriculum and provide opportunities for students to develop the competencies needed to successfully engage prospect jobs and contribute economically and civically to their societies.

The subcommittee could also promote quality content by benchmarking cases of high performing educational systems within and across G20's countries. Finally, it could curate the curriculum to avoid content overload, allowing for differentiation and cohesion across all levels of education.

## **2. Implementing curriculum and high-quality teacher professional development**

One possible approach to conduct this effort is to implement the curriculum within each ISCED level of education through a step-by-step approach. This may give educational systems the opportunity to learn from experimental iteration and improve upon their own experiences, providing schools and teachers with space, resources and training to effectively enact the curriculum in classrooms.

Each ISCED level subcommittee, responsible for curriculum implementation, could select and comprise a working group of high performing teachers to design detailed lesson plans for each subject matter, as well as interdisciplinary units, emphasizing strategies to foster deep learning and transferable skills, such as collaboration and critical thinking. Technology could be used in this context to share these resources widely throughout the network of head teachers and educational professionals. These lesson plans could serve as an input for teacher professional development and be adapted to schools' contexts accordingly.

For example, after having a curriculum designed for ISCED level 3, which usually corresponds to a three-year cycle, a country could close its first learning cycle within a five year time frame. The first year would serve to initiate the process of developing lesson plans and supporting teaching materials, whereas the last would serve to analyze the outcomes of the reform and amend the curriculum, if necessary, according to new societal, educational and market needs, as follows:

(ENACTING CURRICULUM WITH TEACHER PROFESSIONAL DEVELOPMENT) ISCED LEVEL 3 IMPLEMENTATION SUBCOMMITTEE	
First year of implementation	<ul style="list-style-type: none"> <li>Working group develops lesson plans for cohort of educators teaching the first year of ISCED level 3.</li> </ul>
Second year of implementation	<ul style="list-style-type: none"> <li>Cohort of educators teaching the first year of ISCED level 3 participates in teacher professional development and utilize lesson plans elaborated on year 1 by the working group.</li> <li>Working group develops lesson plans for the cohort of educators teaching the second year of ISCED level 3</li> </ul>
Third year of implementation	<ul style="list-style-type: none"> <li>Cohort of educators teaching the first year of ISCED level 3 continues to receive teacher professional development, uses and improves the lesson plans developed in year 1.</li> <li>Cohort of educators teaching the second year of ISCED level 3 uses the resources elaborated on the second year of implementation and participates in teacher professional development.</li> <li>Working group develops lesson plan for the cohort of educators teaching the third year of ISCED level 3.</li> </ul>
Fourth year of implementation	<ul style="list-style-type: none"> <li>Cohort of educators teaching the first and second years of ISCED level 3 teachers continues to receive teacher professional development, uses and improves the lesson plans.</li> <li>Cohort of educators teaching the third year of ISCED level 3 begin to receive teacher professional development and uses the lesson plans in their classrooms.</li> </ul>
Fifth year of implementation	<ul style="list-style-type: none"> <li>First cohort of students from ISCED level 3 who experienced the curriculum graduate and enter labor markets, tertiary institutions, etc. Summative assessments and evaluations point out whether desired bundle of skills and knowledge have been developed in these students.</li> <li>Subcommittee responsible for mapping technological, labor market and society needs uses this data to amend the curriculum for ISCED level 3, maintaining the cycle of learning.</li> </ul>



Time Frame ISCED level 3					
	Year 1 of implementation	Year 2 of implementation	Year 3 of implementation	Year 4 of implementation	Year 5 of implementation
Working Group  <b>Lesson Plans and Teaching Resources</b>	<b>PREPARE</b> lesson plan models and interdisciplinary units for cohort of educators teaching the first year of ISCED level 3.	<b>PREPARE</b> lesson plan models and interdisciplinary units for cohort of educators teaching the second year of ISCED level 3.	<b>PREPARE</b> lesson plan models and interdisciplinary units for cohort of educators teaching the third year of ISCED level 3.		
Working Group  <b>Teacher Professional Development</b>	X	Cohort of educators teaching the first year of ISCED level 3 receive teacher professional development using teaching resources and <b>APPLY</b> it in classrooms	Cohort of educators teaching the third year of ISCED level 3 receive teacher professional development using teaching resources and <b>APPLY</b> it in classrooms	Cohort of educators teaching the third year of ISCED level 3 receive teacher professional development using teaching resources and <b>APPLY</b> it in classrooms	
	X	X	Cohort of educators teaching the first year of ISCED level 3 continue to receive teacher professional development and <b>IMPROVE</b> teaching resources, applying them in classrooms	Cohort of educators teaching the second year of ISCED level 3 continue to receive teacher professional development and <b>IMPROVE</b> teaching resources, applying them in classrooms	Cohort of educators teaching the third year of ISCED level 3 continue to receive teacher professional development and <b>IMPROVE</b> teaching resources, applying them in classrooms
Working Group  <b>Evaluating and curating</b>					<b>EVALUATE</b> knowledge and skills of first cohort of student who experienced the curriculum through a summative assessment. Amend curriculum, if necessary.

Instead of implementing the curriculum and closing the learning cycle, waiting for another major curriculum reform to take place, this policy brief calls upon G20 countries to amend and curate the curriculum on an ongoing basis through established working committees, using available data and evidence from iterative learning processes to guide schools as they prepare students to become high-skilled, informed citizens of their nation-states. Through iteration, school systems may be able to mirror evolving societal, technological and market developments and better equip students to live fulfilling lives in the world of today and tomorrow.

### **3. Evaluating curriculum and teacher professional development initiatives**

One of the greatest challenges to promote collective learning in G20 is measurement cohesion in skill policy. To comprehensively inform the debate across G20 countries, it is germane that member states come to an agreement of which framework they will use to define, monitor and evaluate skills, especially those placed in the socioemotional domain. For example, among other matters, governments have to determine whether they will focus on biometric, psychometric and experimental evaluation methods of social emotional skills, the frequency in which this data will be collected, as well as its validity and reliability mechanisms.

G20 members can collude and create an index of the types of bundles of skills that they think are most valuable and collectively support one another by providing technical expertise to establish cohesive Monitoring and Evaluation systems. This will be a viable route to promote collective learning as G20 members recreate new curriculum, undergo teacher professional development reforms, and build their learning cycles. Current initiatives undertaken by the OECD and the organization Evaldesign could contribute tremendously to G20 endeavors on this matter.

## References

1. Andrews, M., Pritchett, L., & Woolcock, M. J. (2017). *Building state capability: Evidence, analysis, action*. Oxford: Oxford University Press.
2. Balliester, T., & Elsheikhi, A. (2018, March). The future of work: A literature review. International Labour Organization. Retrieved from [http://www.ilo.org/wcmsp5/groups/public/---dgreports/---inst/documents/publication/wcms\\_625866.pdf](http://www.ilo.org/wcmsp5/groups/public/---dgreports/---inst/documents/publication/wcms_625866.pdf)
3. Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). Effective teacher professional development. Palo Alto, CA: *Learning Policy Institute*.
4. G20. (2017). Task Force: The Digitalization [HTML]. Retrieved April 16, 2018, from [http://www.g20-insights.org/policy\\_area/future-of-work/](http://www.g20-insights.org/policy_area/future-of-work/)
5. Gurria, A. (2016). Pisa 2015 Results in Focus. *PISA in Focus*, (67), 1.
6. International Labour Organization. (2018, February 17). The Impact of Technology on the Quality and Quantity of Jobs. International Labour Organization. Retrieved from [http://www.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/publication/wcms\\_618168.pdf](http://www.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/publication/wcms_618168.pdf)
7. OECD (2016), *PISA 2015 Results (Volume I): Excellence and Equity in Education*, PISA,
8. OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264266490-en>
9. OECD. (n.d.). OECD Centre for Skills. OECD Publishing. Retrieved from <https://www.oecd.org/skills/OECD-Centre-for-Skills.pdf>
10. World Bank. (2013). World Development Report 2014: *Risk and Opportunity - Managing Risk for Development*. The World Bank. <https://doi.org/10.1596/978-0-8213-9903-3>

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