

How to ensure a cadre of competent, effective and well-supported teachers: a policy paper for the G20

Executive Summary

In schools, teachers are what matter most. They remain the ‘most influential and powerful forces for equity, access and quality education and key to sustainable global development.’ⁱ Whilst wide-ranging consensus on the critical role of teachers has been reached across the globe, what makes a person a more effective teacher than another, how to attract these very individuals into the profession, and how best to motivate and retain them once in post, remain more complex and contested issues. Teacher quality, status and working conditions all matter in the delivery of a quality education which is almost entirely dependent on effective, competent, well-supported and motivated teachersⁱⁱⁱⁱ.

Improving teacher effectiveness is amenable to national policy, and governments across the world have implemented actions to this end. However, governments cannot take responsibility for real sustained change without the support of the wider global community. The G20 form some of the largest education systems globally and member countries fund a vast proportion of global education spending. Through their role as funders and influencers the G20 can play a critical role in developing and guiding a global teacher agenda.

This paper recommends the following actions to be considered by G20 Education Ministers:

Proposed Recommendations

- **Improve teacher quality:** The G20 should ensure that quality learning and teaching are a high priority within the G20 Agenda. This will require strengthening professional teaching standards and teacher professionalism through the involvement of educators and further developing a global framework on professional teaching standards
- **Recruit and retain high quality teachers:** Given persistent teacher shortages, particularly in developing countries, and the aging population of educators in many OECD and other countries, the G20 should consider ways in which they can prioritise the creation of a pool of teacher candidates that is more diverse and representative, particularly of disadvantaged communities, and work with other countries to prioritise this agenda.
- **Motivate and support teachers:** The G20 should encourage national governments to empower and support teachers to grow to be more effective by providing them with appropriate levels of autonomy and responsibility. This involves creating a career progression and appraisal framework with appropriate accountability mechanisms. Legitimacy and credibility can be afforded to teachers through professionalizing the cadre.
- **Encourage and promote social dialogue:** The G20 should foster and promote social dialogue amongst all actors in the education space including professional associations to build mutual trust and strong political will for policy implementation.

Background

Access to schooling remains a fundamental challenge for many children with 263 million children and youth still out of school^{iv}. However, inferior quality schooling is holding back even those who are in school from learning with one-third of primary children not able to learn the basics whether they are in school or not. Sixty-nine million new teachers are needed to meet universal primary and secondary education goals^v and these teachers need to be equipped with the skills, knowledge and aptitude need to be well-supported and motivated to deliver a quality education^{vi}.

The international community has pledged to have all children and youth in school and learning by 2030 (SDG4). The fundamental role of teachers in this pledge and in building sustainable societies was also recognised through the 2030 Agenda for Sustainable Development, adopted by the United Nations (UN) General Assembly in September 2015, where the UN member states committed to substantially increase the supply of qualified teachers in order to meet the new global education goal and its targets. The critical role of teachers was reaffirmed by the education community through the Incheon Declaration and the Education 2030 Framework for Action, adopted by UNESCO member states and partners in May and November 2015, respectively. In Incheon, South Korea, governments and partners made a firm promise, stating:

We will ensure that teachers and educators are empowered, adequately recruited, well trained, professionally qualified, motivated and supported within well-resourced, efficient and effectively governed systems (Incheon Declaration and Education 2030 Framework for Action).

Current and emerging trends in the global education landscape make the teacher's job even more complex, challenging and demanding. The global discourse around learning outcomes can reduce quality education and learning to narrow measurable outcomes, thus putting enormous pressure on schools and teachers to focus on preparing students for examination and risk taking away the teachers' professional autonomy and forcing them to "teach to the test"^{vii}. Others, however, argue that data on outcomes and progress made by all groups including marginalised groups, enables governments including resource-constrained ones to make choices about how to distribute limited resources, in order to further equity as set out in the related policy paper.

This policy paper examines some of the pertinent issues relating to teacher effectiveness; recruitment and allocation; remuneration, retention and motivation; capacity development and engaging teachers in social dialogue. It also provides policy directives within each of these sections.

Improving Teaching Quality

An education system is only as good as its teachers^{viii}. But what makes a good quality teacher? Most would agree that teacher quality goes beyond a teacher's ability to improve student

learning outcomes and includes a wider array of student outcomes such as progress in relation to social, emotional and physical indicators. Being taught by a good quality teacher has been known to impact not only short-term achievement and outcomes but also more longer-term outcomes such as future earnings, better health, lower propensity to criminality, higher civic engagement, greater chances of employment and improvement in how an individual performs in college^{ix}.

Teacher quality has been measured using a wide array of metrics. These include teacher qualifications, years of experience, teacher subject-matter knowledge, classroom observations on how the teacher teaches and using a variety of statistical techniques such as value-added models and education production functions. Results on the efficacy of these measures have been mixed and research has questioned whether those characteristics that are easily observed in a teacher (often the attributes on which teachers are recruited and judged) actually relate to how 'effective' a teacher is^x. It is likely that teacher effectiveness can be attributed to a combination of traditional observable characteristics, subject-matter knowledge, unobservable characteristics (e.g. commitment, motivation, effort) and pedagogical practices. Thus, it is not only what teachers know, who they are, but also what they do that matters^{xi}. Nevertheless, studies from contexts as varied as India^{xii} and Uganda^{xiii} have found that 'good quality teachers' consistently 'produce' high achievement amongst their students and that improving teacher quality can also improve the efficiency of other educational interventions. However, the teachers themselves and how they teach is a complex myriad of personal traits, experiences, surrounding conditions, the nature of interactions with pupils and the wider school network, the student's home background and various other factors that are impossible to fully capture. To further complicate matters, a teacher who is effective for one pupil may not necessarily be effective for another pupil or in another context.

Therefore, what makes a good quality teacher remains a fundamental concern for policy makers in decisions relating to recruitment, remuneration, allocation, continuing professional development and motivation. Robust research examining this has found that no single 'measure' can provide a definitive answer as to whether a teacher will be effective or not. Instead, a more holistic and comprehensive approach to measuring teacher quality should be used. Having good quality teachers across the entire schooling cycle is incredibly important as it has been shown that being repeatedly exposed to 'high value adding' teachers over the educational lifetime can have far-reaching results for that child's economic and life outcomes. It is also known that disadvantaged students are more likely to be taught by inexperienced and less well trained and, all things being equal, less effective teachers year on year^{xiv} and that this cumulative disadvantage as these student's progress through the schooling system can have serious repercussions for the individual and the economy on the whole^{xv}. It is also known that a shortage of effective teachers is likely to disproportionately affect more marginalized and disadvantaged children^{xvi}.

Successful education systems have recognized investment in teacher development as critical for quality education^{xvii}. Key factors that contribute to the preparation of an effective teacher include: (a) Developing autonomous thinking teachers, (b) A value-based teacher education, (c) Robust partnership and alignments of stakeholders' goals, (d). Strong theory-practice link.

Singapore provides an example of a high-performing education system with a high quality teaching force. Certain characteristics of this system have been identified as shaping this success^{xviii}:

1. **A clear vision and belief in the centrality of education for every individual, the economy, and nation building.** A focus on future-oriented and long-term goals of education, policy continuity are made possible through stable government.
2. **A systemic approach to innovation, reform and change.** The Singapore education system is coherently managed such that there is alignment among the key components of the system including the Ministry of Education (Policies), teacher preparation institutions (Preparation), and Schools (Practice).
3. **Investing in a high-quality teaching force.** The Ministry of Education recruits teachers from the top one-third of the cohort, the recruitment process is highly selective and is regarded as one of the most effective among top performing systems by McKinsey and Company (2007). Teaching is not only highly attractive, but also enjoys high social status and respect from the public.
4. **Developmental and educative appraisal for ongoing learning.** The Enhanced Performance Management System (EPMS) is a structured method of appraisal, which is holistic in nature and customized to the career track that a teacher has selected. The Teacher Growth Model was developed as a learning framework with desired teacher outcomes and is a Learning Continuum which allows the teachers to take ownership of their own professional development and plan their own learning to meet their own needs.
5. **Learning system and learning profession.** Singapore's education system creates a culture of ongoing learning and a system that is dynamic.

Finland also provides an example of a high-performing education system where equity remains a central objective. In addition to this, mutual trust between stakeholders shapes accountability in the country with teacher accountability policies originating with the teachers and the teachers governing them. This underscores the high regard for the profession within the country. Finnish teachers are actively involved in determining policy content such as curriculum and they have considerable autonomy^{xix}.

Teacher Recruitment and Allocation

Teachers play a key role in achieving SDG4, Incheon Declaration and other international and national pledges to education over the upcoming decades. The G20 are committed to each of these pledges and declarations. Nearly 70 million new teachers are required to reach the 2030 goals with the most acute shortages affecting certain regions (Sub-Saharan Africa) and levels of education (secondary). Worrying statistics include an estimated 90% shortage of secondary school teachers in SSA, the region with the fastest-growing school aged population. Addressing shortages in teacher numbers in the immediate future also requires urgent attention because the equity gap in education has and is exacerbated by the shortage and uneven distribution (based on gender, training, experience, qualifications etc.) of teachers, especially in disadvantaged areas (Incheon Declaration). These factors and given the variability, persistence and unpredictability of teacher effectiveness, the selection of teachers is a very important policy issue^{xx}.

Teacher shortages have contributed to many classrooms across the globe being staffed by unprepared and/or inadequately trained para-professionals. According to emerging findings from Education International's Status of Teachers survey, to be launched later this year, reveal serious teacher shortages, particularly in early childhood education, secondary education and TVET sectors. The majority of the respondents (78.8%) report that the teaching profession is not attractive to young people, thus making it difficult to train and recruit adequate numbers of new teachers. This is partly due to low teacher status - the majority of respondents reported that teachers are accorded average or low professional status by society. The teacher shortage challenge is exacerbated by that of low teacher quality, exacerbated by inadequate initial training, professional development opportunities and support. This, coupled with large class sizes, inadequate infrastructure and resources has had serious consequences on the quality of teaching and learning around the world. For example, UNESCO estimates that 387 million children of primary going age lack minimum proficiency levels in literacy and argues that the global learning crisis could end if governments invested in teachers by attracting the best candidates into the profession, training them well, getting them where they are most needed and by providing incentives for them to remain in the profession^{xxi}.

The first step to ensuring a good quality teaching force is attracting the best and most motivated candidates into the profession. Many choose to become teachers for intrinsic reasons (such as the desire to help others learn). Unfortunately, teaching is not reputed as being a highly prestigious career in many contexts and, therefore, may not draw the best candidates into the cadre. Evidence from 31 OECD countries shows that teachers with higher cognitive skills can help explain international differences in student performance across developed countries^{xxii}. It is not enough to just attract adequate numbers of potential teachers, but these individuals must themselves have a sound knowledge of the subjects they will be teaching and the ability to teach them well.

The quality of initial pre service training in too many countries is poor, and ineffective at boosting student learning; improving the evidence base behind effective pre service training and increasing the uptake of such schemes and curricula is key. The profession also fails to attract the right balance of men and women, those from disadvantaged background or disabilities etc.^{xxiii} For example, at the secondary level, there are less female teachers in general compared to male teachers, particularly in SSA, South Asia and North Africa. Policy, therefore, must attract the right teachers as well as the right mix of teacher, especially to schools in marginalized areas..

The next step is ensuring teacher allocation is both efficient and equitable. The unequal distribution of teachers has presented challenges for the learning of children in many contexts. Inequity in teacher allocation has also led to many children, particularly from a disadvantaged background, either not having a teacher at all or being taught by one who is not adequately prepared or supported to teach them. SACMEQ data provides evidence that those teachers with better subject knowledge were more commonly deployed to urban and better resourced schools in South Africa. Similarly, in Kenya, teachers teaching children from the wealthiest backgrounds had better test scores than those teaching the poorest^{xxiv}. The

policy recommendations in this paper call for better planning in relation to deployment, locally recruited teachers^{xxv} and policies to help rebalance inequitable teacher allocations.

Teacher Remuneration, Retention and Motivation

In addition to the intrinsic attraction of teaching, extrinsic rewards such as financial and non-financial remuneration not only attract candidates to the profession but may help in retaining the most effective teachers. Teacher pay remains an important incentive tool in the hands of policy makers. Low salaries not only lead teachers to leave the profession but can also prove a disincentive to the productivity of a teacher. With human resource costs making up the vast majority of education budgets across the globe, ensuring a balance between adequately rewarding teachers and setting wages at a realistic level for enough teachers to be sustained within the system can prove a critical challenge. Finding the appropriate salary level is all the more critical given that higher teacher salaries have also been linked to improved student outcomes in some contexts – but not in others^{xxvi}. In many countries teachers earn below the poverty line and are often not only paid too little, but often too late.

In many contexts, contract teachers have emerged to meet teacher shortages by financially constrained governments. This may have implications on pupil learning outcomes but cannot be seen as long-term, large-scale, cost-saving solution to the learning crisis. In other settings, performance-related pay for teachers has been suggested as an accountability mechanism and as a means of rewarding teachers. However, not only is judging teacher performance complex, quantifying and rewarding teachers further complicates the issue. Some countries where this has been implemented have also faced some unintended consequences of sanctioning teachers and schools such as reduced cooperation amongst teachers, teacher ‘teaching to the test’ and focusing on the top students to lift averages to the detriment of disadvantaged learners. There is limited evidence that performance-related pay has a significant impact on outcomes or on teacher motivation^{xxvii}.

Providing an attractive career path with clear promotion criteria that take into account initiatives by teachers (such as learning support for weak students) has been seen as a more appropriate way of motivating teachers^{xxviii}. In this way, teachers are rewarded for meeting their responsibilities outside of classroom instruction that are also part of their role as a teacher. Similarly, addressing teacher absenteeism and low time-on task, which can be driven from system-wide factors (such as distance to school, illness, non-teaching obligations, administrative tasks) and providing conducive conditions to allow teachers to fulfill their instruction time obligations will have substantial cost-savings and motivate the teaching cadre^{xxix}.

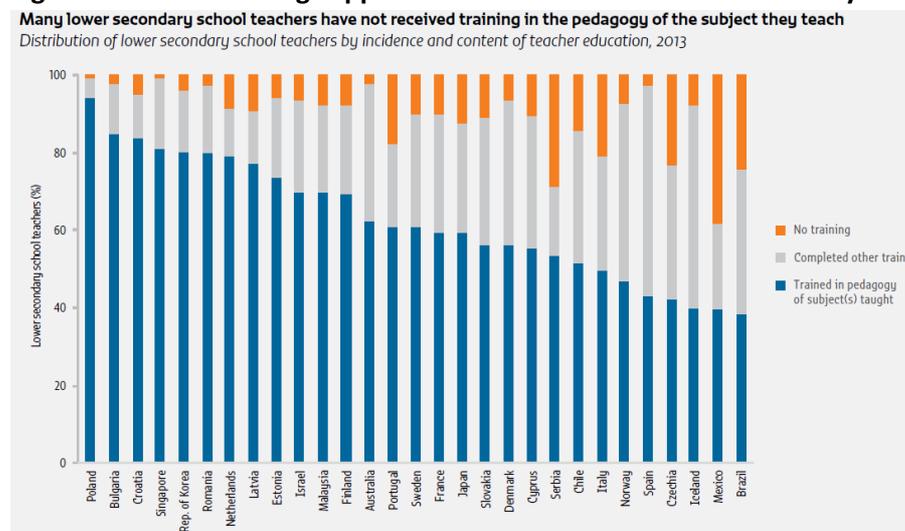
Teachers are often working in extremely challenging conditions and with highly disadvantaged students. Motivating these individuals and providing them with the support they need to ensure quality education requires greater focus. Teachers working with disadvantaged students have noted that they remain motivated by a deep belief in the transformative power of education and that effectively teaching these children is built on strong relationships with students. The key challenges faced by these teachers include not only the poverty and socio-emotional needs of these children but can be further exacerbated by rigid curricula, poor

infrastructure and resources, politics and discrimination towards disadvantaged students^{xxx}. In particular, teachers working in crisis environments face further challenges and need necessary protection, support, training and care. As the number of people forced to flee their home communities continue to grow, and climate change has contributed to a slow but steady increase in serious natural disasters such as flooding and typhoons, the role teachers are asked to play has become extremely challenging. In emergencies, the teacher remains even more central to students and the community at large, since it often is the space and social process that most resembles normalcy in abnormal times while also often offers protection for children. Yet, teachers in crisis settings are not provided nearly as much extra support as they require. On the contrary, in some countries teachers either become targets as they are seen as an extension of the government or the opposition, or are faced with unrealistic expectations, with a growing policy trend of expecting teachers to provide not only academic learning but also to be able to provide social and emotional learning and psycho-social support to students while often being extremely overwhelmed themselves by the crisis they find themselves in^{xxxi}.

Teacher Capacity Development and Competence

Educational quality issues can be better addressed through supporting the existing teaching workforce to deliver a more high-quality education particularly through the highly policy-amenable tool of training. Initial teacher training should form the foundation for preparing teachers in delivering a good quality education. These training programmes should be of adequate length and of sufficient quality. Good quality initial teacher education also has the potential to make up for weak teacher subject knowledge. Whilst in an ideal scenario, teachers would enter the profession with adequate competencies and knowledge in the subjects they intend to teach, this is often not the case. In many contexts, particularly in the developing world, there is a noticeable lack of content knowledge, and inability to deliver the curriculum by teachers who often acknowledge themselves that they are concerned with their level of training^{xxxii}. Figure 1 illustrates the lack of training support provided to teachers in the subject they teach across various contexts.

Figure 1: Lack of training support for teachers at the lower-secondary level



Source: UIS

Continued and on-going professional development not only improves teachers' competence but can help with motivation and support particularly when teachers are working in challenging and adverse environments. Teachers can exchange ideas and build relationships to help them feel supported and equipped to deal with the situations they face. These sorts of initiatives will not only help teachers to feel valued but also empower them^{xxxiii}. Given the differing pre-requisites and numerous and alternative paths to entering the teaching profession, many teachers may find they do not have the adequate knowledge and skills once they are in the profession. This gap can be filled by high quality and ongoing in-service training. Therefore, even when initial teacher training has not provided an adequate basis for teaching, effective in-service training is a potentially powerful policy tool that can be used to increase the overall competency of the teaching cadre by providing sufficient, on-going and high quality in-service training to all teachers in the profession. In addition to this, it is important for training to focus on preparing teachers to support a diverse set of learners (e.g. those from poor and disadvantaged backgrounds, from different ethnic groups, disabled learners etc.). Initial teacher education also needs to focus on providing classroom experience to new teachers so that they are develop skills in a class-room setting. And finally, policy makers need to remain aware of the need to update the training of trainers and to ensure all other elements within education systems align to support teachers' ongoing professional development^{xxxiv}. In the lauded Singaporean context the Graduand Teacher Competencies (GTCs) outline the professional standards, benchmarks and goals for graduands of the institute's teacher preparation programs. The GTCs spells out the expected teacher performance outcomes in terms of professional practice, leadership and management, and personal effectiveness. The teacher's professional development journey however is viewed as a continuum with additional competencies being built and developed through continuous professional development programs as the teacher progresses along his/her professional development journey^{xxxv}.

The introduction of information and communications technology (ICT) in schools can be a powerful tool for improving teaching and learning. Unfortunately, millions of teachers around the world remain without basic digital skills. As stated in the Education 2030 Framework for Action, "ICTs must be harnessed to strengthen education systems, knowledge dissemination, information access, quality and effective learning, and more effective service provision". It should however be stressed that ICTs cannot replace the teacher, or the invaluable interaction between the teacher and students, or among the students^{xxxvi}. Ensuring the digital literacy of teachers and pupils alike should be a key focus going forward. Access to computers and internet connectivity, particularly in some regions such as SSA, still prove a challenge to the introduction of ICT in schools. Only 26% of secondary school teachers in Kenya, for example, are computer literate^{xxxvii}. Training programmes will need to take into account this changing educational landscape.

One initiative that has been set up by Education International and Oxfam-Novib (Netherlands) is the Quality Educations for All project (Quality-ED). This was used as an opportunity to integrate life-skills education and pedagogical innovations into teacher education. This programme used a teacher competence profile to inform initial and in-service training, guide

the revision of the teacher-training curriculum, align the monitoring of teacher performance with competencies, and enable the on-going professional development and motivation of all teachers. It aimed to unify different classifications of teachers on an agreed-upon single-standard of qualification and professional competences. Competence profiling is being increasingly promoted and can be used as an important tool if developed in cooperation with all involved stakeholders^{xxxviii}.

Social Dialogue (engaging teachers in policy development)

Social dialogue, and in particular, the engagement between government and teachers, if done effectively on both sides, can significantly influence the implementation and efficacy of educational policies. Education reforms do not occur in isolation of the world around them but are heavily influenced by the larger macro-governance environment and by the motivations and actions of important players both inside and outside the educational sphere.

Teachers play a pivotal role in the implementation of education policies and many of the policies that are enacted have a huge impact on their day-to-day work. Effective policy implementation and subsequent results can be harder to achieve if the teaching force are held at arm's length when they can be the key driving force in the policy team. All stakeholders should be engaged from the beginning through to the end of the policy making process. Resistance can potentially be alleviated through negotiations, adapting policies in light of teacher input where mutually beneficial and, most importantly, by keeping the channels of communication open and transparent. Teachers are often the 'silent recipients' of policy making efforts and their transformative power as problem solvers and change-makers not recognised as playing an essential role in improving educational effectiveness. This often leads to negative perceptions about teachers as ineffectual, resistant to change, or un-willing partners in the achievement of national goals^{xxxix}.

In many contexts, teacher unions, associations and organisations are largely excluded from reform discourse. However, well structured organisations can be a useful mechanism not only for voicing teacher concerns but also as an effective means for channelling government ideas by teachers and governments working together. Teacher unions have a unique role to play in policy formulation and implementation and can be drawn in early and meaningfully into the policy dialogue process^{xl}. Collaborative and productive relationships between teacher unions and governments have been witnessed as being of value in many instances around the world^{xli}. Unions should balance between fighting for improvements in their remuneration and working conditions and their role of defending the quality of the teaching profession and the education system. Examples from Argentina^{xlii} and India^{xliii} provide convincing arguments for engaging with teachers and teacher unions during the policy journey to create a sense of 'ownership' and to ensure that teachers themselves are drivers of policy changes even when those changes require fundamental shifts in the day-to-day workings of teachers. Striking a balance between providing teachers with the agency and voice versus completely giving in to their demands is necessary for the constructive involvement of teachers in the reform process^{xliv}.

Policy Recommendations

Based on the discussions above, this policy note presents several recommendations to the G20 and to national governments and other stakeholders in the education system.

1. To improve teacher quality overall:

The G20 should ensure that quality learning and teaching are a high priority within the G20 Agenda. This will require strengthening professional teaching standards and teacher professionalism through the involvement of educators and further developing a global framework on professional teaching standards^{xlv}.

The G20 also needs to urge national governments to strike a balance between getting teachers into classrooms and the longer-term goal of building up a high quality professional teaching force through focusing on the specific recommendations mentioned below^{xlvi}.

2. To recruit and retain high quality teachers:

This should remain a major priority for the G20, given persistent teacher shortages, particularly in developing countries, and the aging population of educators in many OECD and other countries. The G20 should consider ways in which they can help support national governments in creating a pool of teacher candidates that is more diverse and representative, particularly of disadvantaged communities^{xlvii}.

We also call upon national governments to expand opportunities for initial teacher education (with appropriate entry requirements), in-service training and professional development. This should be accompanied by measures designed to make teaching a first-choice profession for young people. Specific measures, including the introduction of incentives, should be taken to attract female and male teachers to and retain them in rural and other disadvantaged areas^{xlviii}. Governments should also plan deployment effectively and introduce strategies such as local teacher recruitment, getting teachers with strong subject knowledge to disadvantaged schools, and providing incentives to teach shortage areas to rebalance un-even teacher allocation^{xlix}.

3. To ensure adequate funding for education and teachers:

Inclusive free quality public education for all can only be achieved if G20 and all governments invest adequate domestic resources in education and teachers, coupled with adequate and predictable external financing and support, particularly for lower and lower-middle income countries.

We encourage the G20 countries to continue to finance development aid and support developing countries to meet Sustainable Development Goal 4 on quality education and other relevant SDG and education targets.

We call upon the G20 to work with national governments as appropriate to support mechanisms to increase their domestic revenue collection through taxation. Such discussions of financing between the G20 and other national governments should also be cognisant of the generally agreed minimum international funding benchmarks of 6% of GDP or 20% of the national budget, and the argument that such funding levels would go a long way in strengthening education systems around the world.ⁱ

4. To improve the competencies of the existing workforce:

We call upon national governments to provide all teachers and educators, including school leaders and education support personnel with a quality, free and government-funded continuous professional development training programme that is relevant to their professional development needs through an open and ongoing dialogue with teacher stakeholdersⁱⁱ.

We also encourage national governments and teacher training providers to provide training programmes that are more relevant and suited to the needs of the population. We also encourage them to promote more linkages between training providers, improve curriculum relevance and incorporate more up-to-date pedagogical practices and situation-specific training. This will ensure that training is not only relevant but also useful and that teachers' content knowledge is up-to-date and that they have developed the techniques necessary for transferring that knowledge to their students. Additionally, simple, straightforward in-service teacher training models may be more easily scaled and more successfully cascaded than complex models that have multiple componentsⁱⁱⁱ.

5. To motivate and support teachers:

The G20 and national governments should prioritise ways of motivating and supporting teachers with appropriate levels of autonomy and responsibility through clear career progression and appraisal frameworks. Professionalising the teacher body provides legitimacy and credibility and it is important for governments to encourage the development of strong and credible teachers' associations and unions. These 'professional organisations' responsible for professional teaching standards and accountability and support could help foster professionalism in the teaching professionⁱⁱⁱⁱ.

6. To encourage and promote social dialogue:

We call upon the G20 to foster and promote social dialogue amongst all actors in the education space. Effective policy implementation requires strong political will and mutual trust amongst actors and often this can be more effectively engendered at the micro level when encouraged at the macro level.

Teachers should be engaged from the outset of policy development. Encouraging social dialogue through teacher union and associations can provide an effective mechanism for channelling the promotion of government ideas and also providing a mechanism for teachers to voice their concerns^{liv}.

7. To shift the discourse:

The international community, government and other stakeholders in education should support a discourse that is focused on test outcomes and additionally that recognises learning that is valued for its own sake^{iv}. Improving teacher effectiveness requires considering a wide range of outcomes and an investigation into the quantity and quality of inputs the profession is receiving when judging them on their outputs.

Acknowledgements, references and further information

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Individual references are in the end notes.

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- i www.unesco.org; Verger et al. (2013)
- ii Hanushek and Woessman, 2011; Education International 2018
- iii Drawn from Education International's written contribution for this note referenced as EI (2018).
- iv <http://uis.unesco.org/en/topic/out-school-children-and-youth>
- v UIS statistics
- vi Bruns and Luque (2014)
- vii These two paragraphs draw entirely from the Education International written contribution in developing this paper.
- viii GMR 2014
- ix Chetty et al. 2014
- x Goldhaber 1999, Burgess et al. 2009
- xi Allen & Duthilleul 2005
- xii Azam and Kingdon (2015)
- xiii Julie Buhl-Wiggers, Jason T. Kerwin, Jeffrey A. Smith and Rebecca Thornton (2017)
- xiv Goldhaber, Quince and Theobald 2018
- xv Lee (2018)
- xvi Alliances Varkey Foundation (2018)
- xvii This paragraph is adapted from the written contribution from Professor Oon-Seng Tan.
- xviii Goodwin et al. (2017); Darling-Hammond et al. (2017); Tan, 2012; Tan, Low & Hung, 2017 & Tan 2018.
- xix GEMR 2017
- xx Burgess 2015
- xxi This paragraph is provided by Education International as part of their written contribution towards this paper.
- xxii Haunshek et al (2018)
- xxiii GMR 2014
- xxiv Altinok 2013 referenced in the GMR 2014.
- xxv Education Commission (2016)
- xxvi Glewwe et al. 2011 and Dolton and Marcenaro-Gutierrez 2011 cited in the GMR 2014.
- xxvii GMR 2014 and GEMR 2018.
- xxviii GMR 2014.
- xxix GEMR 2018.
- xxx Alliances Varkey Foundation (2018)
- xxxi Input from Dubai Cares
- xxxii Aslam et al. (2016)
- xxxiii UNESCO and IICBA (2017)
- xxxiv GMR 2014.
- xxxv The Singapore example is taken from the written contribution from Professor Oon-Seng Tan.
- xxxvi EI (2018) written contribution.
- xxxvii Education Commission (2016).
- xxxviii Education International & OXFAM-Novib (2011)
- xxxix UNESCO and IICBA (2017); Verger et al. (2013)

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- xi Sinyolo 2007
- xli Bascia and Osmond (2013)
- xlii <https://www.brookings.edu/blog/education-plus-development/2015/04/09/reforming-education-from-the-bottom-up-in-buenos-aires-argentina/>
- xliii Aslam and Rawal (2016)
- xliv Teachers Matter: Attracting, Developing and Retaining Effective Teachers OECD 2005
- xlv As is currently being developed by EI, UNESCO and the International Task Force on Teachers. This recommendation is from the written contribution provided by EI for this policy note (EI 2018).
- xlvi McBeath (2012).
- xlvii Alliance Varkey Foundation (2018).
- xlviii This recommendation is from a written contribution provided by EI for this policy note (EI 2018).
- xlix GMR 2014.
- ¹ This recommendation is from a written contribution provided by EI for this policy note (EI 2018).
- li Adapted from EI's written submission.
- lii PSIPSE (2017)
- liii Aslam et al.(2016)
- liv Aslam et al. (2016)
- lv McBeath (2012).