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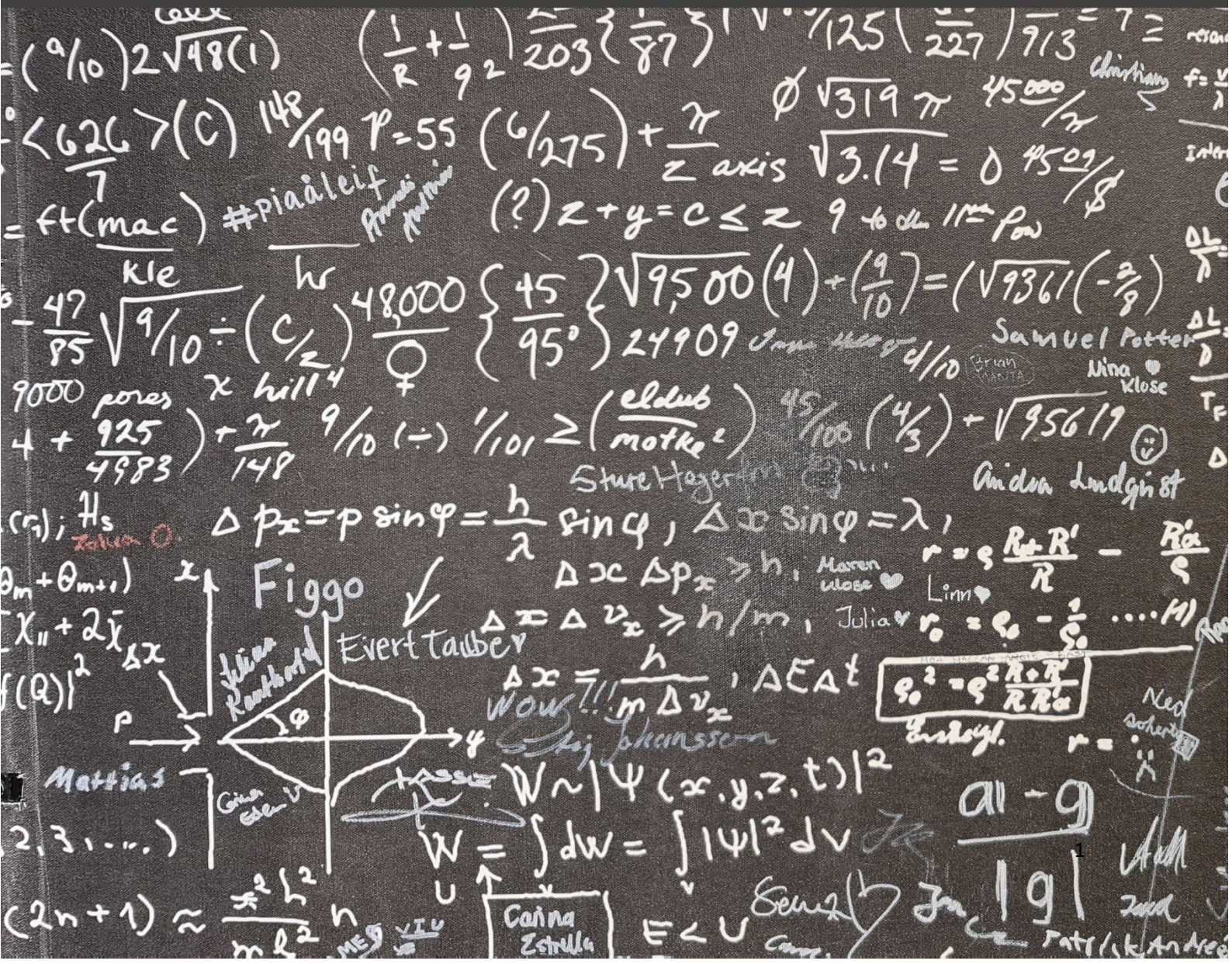
Strategic guidance note on teachers

(Final 2021 Version)



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Strategic guidance note for increased efforts and improved coherence in Norad's support to quality through increased focus on teachers (Final 2021 Version)

1. Introduction

The purpose of this guidance note is to improve the strategic dialogue with partners around teacher issues in education programs supported by Norway, and help promote more coherent investments and follow-up on teacher components as a means to improving quality and learning. Particular emphasis is placed on reaching the most marginalized. The main intended audience of the strategic guidance note are staff managing or supporting part of the Norwegian education for development efforts, including Norad advisors as well as embassy and MFA staff.

The overall goal of Norwegian investments in teacher issues as part of education programs is to contribute to SDG 4, and specifically SDG 4.c, as a means of achieving the targets under SDG 4.1 – 4.7.

> *SDG 4.c: By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States.*

The scope of this note is focused primarily on teachers working in basic education: in primary and lower secondary schools. It also covers educators working in Technical Vocational Education and Training (TVET). The policy recognizes that some of the most marginalized attend non-formal or alternative basic education. The management of teachers in non-formal education is not covered specifically by this strategy. It is the aspiration, however, that all teachers, including those working outside of the formal school system, should be qualified, and the principles outlined in this strategy will also be relevant for teachers in non-formal education. Also, this document recognises that valuable lessons from the non-formal sector can be useful for informing teacher strategies in the formal sector. Other education workforce roles can also be important for ensuring inclusion and wellbeing of learners and provide vital support for teachers.

The main part of the strategic guidance are the next two chapters: Chapter 2 summarises the evidence on the best approaches to improving teaching and the discourse related to normative standards in teacher management; and chapter 3 outlines Norwegian policy priorities with indications of issues Norad can raise with partners to increase the effectiveness and strengthen the teacher-related components in programs and initiatives receiving support. In addition, a separate note identifies some possible entry points for strategic dialogue with partners around Norwegian priorities and purpose of this dialogue. Several background notes were developed as part of the process arriving at this strategic guidance note, including one on how teachers feature in current programs supported by Norad, and one on how teachers feature in the strategies of some other donors.

Backdrop

Prior to the COVID-19 school closures, more than half of the world's children and youth did not meet minimum proficiencies in reading and math, two-thirds of them despite being in school.[1] In low-income countries only 10 percent of children had learned to read basic texts by the age of 10.[2] The growing evidence on learning, and lack of learning, led to the coining of a "Global Learning Crisis".

As the vast ramifications of school closures due to COVID-19 became clearer, there were indications that the learning loss resulting from the pandemic would be significant. Globally, 90 percent of children and youth had their education interrupted due to COVID-19.[3] Pre-existing learning inequalities were amplified by the crisis, with the most marginalized, especially girls, lacking access to distance education technologies and learning support from literate adults in the household.[4] The digital divide was most acute in low-income countries. But there were also indications that focused efforts on strengthening quality instruction when schools reopen could mitigate learning loss and offer potential to "Build Back Better".[5]

It is even more important to support teachers and understand how best to prepare teachers for a situation in which schools might have to be much more flexible in terms of how they operate and where learning should continue throughout various limitations.[6] Moreover, preparing teachers in the use of various distance learning approaches requires more attention than in the past, and preparing teachers to reach the most marginalized is crucial as inequity has increased with COVID-19.[7] Anecdotal evidence also suggests an increase in recognition during school closures of the key role teachers play.

Evidence points to teachers as the most important school-level factor impacting students' performance.[8] High quality teaching can impact long-term student well-being and academic performance, and also improve equity.[9]

Headline figures on the global state of teacher qualifications and training

Based on 2019 global statistics, 81% of primary teachers and 78% of secondary teachers had the minimum required qualifications.[10] Teacher qualification rates were lowest in Sub-Saharan Africa, with only 65% of primary and 51% of secondary teachers qualified. In Madagascar, for example, only 15% of teachers were qualified.

[1] Based on 2015-numbers from UNESCO: https://unstats.un.org/sdgs/report/2019/goal-04/
[2] Save our Future (2020) Averting an Education Catastrophe for the World's Children
[3] Ibid.
[4] Ibid, also see Naylor, R. Gorgen, K (2020) Overview of emerging country-level response to providing educational continuity under COVID-19. What are the lessons learned from supporting education for marginalised girls that could be relevant for EdTech responses to COVID-19 in lower and middle income countries?
[5] Banerji, R (2020) Learning "Loss" and learning "gain" in primary school years. What do we know from India that can help us think forward in the COVID-19 crisis? RISE insight Series https://riseprogramme.org/publications/learning-loss-and-learning-gain-primary-school-years-what-do-we-know-india-can-help-us
[6] See, for example, McAleavy, T. (2020) Learning Renewed. Education Development Trust https://www.educationdevelopmenttrust.com/our-research-and-insights/commentary/learning-renewed-a-safe-way-to-reopen-schools-in-t
[7] first_brief_kix_covid-19_observatory.pdf (adeanet.org)
[8] The Education Commission (2019) Transforming the education workforce: learning teams for a learning generation. The Education Commission; New York.
[9] Ibid.
[10] World Teachers' Day 2020 Fact Sheet

In sub-Saharan Africa there were 58 primary school students to every one trained teacher, and 43 students per trained teacher at the secondary level.

In OECD countries only a minority of teachers (43%) reported that they felt prepared to use Information and Communication Technology (ICT) in teaching. This proportion is likely to be far lower in developing country contexts.

61% of countries claimed to provide teacher training on inclusion. Countries in sub-Saharan Africa and Central and Southern Asia were the least likely to provide such training.

Source: UNESCO (2020) World Teachers' Day 2020 Fact Sheet

2. Emerging evidence and discourse on "what works" in teacher policy

There is a strong evidence base to indicate that the teacher is the most significant school level determinant of student learning outcomes.[11] But the evidence on *how* systems can improve the quality and effectiveness of their teacher workforce is much less clear.[12] As several reviews have indicated, there are no "magic bullets",[13] and the effectiveness and appropriateness of any intervention will depend on the current state of the education system.[14] As well as a technical understanding of what works at the project level, policy makers need to consider how these strategies can be integrated and scaled into system level reforms, taking into account political and normative considerations as well as other contextual issues.

Drawing on a number of recent global reviews, this section summarises some of the existing evidence regarding effective teacher policies and specific interventions in teacher management and other issues related to teachers. It also discusses the current discourse on political and normative issues in teacher policy making and the limitations of the existing evidence base.

Limitations of the evidence base for teacher policy making

Systematic and rigorous reviews should ideally offer policy makers a clear summary of "what works". However, a common limitation of systematic reviews, and, to a lesser extent, rigorous reviews, is that they prioritise quantitative evidence from experimental (such as randomized control trials) and quasi- experimental research designs, over more qualitative and observational evidence. This tends to bias the findings towards interventions that can be more easily evaluated through an experimental research design. This favours evidence from project-type interventions over system-wide reform. It favours interventions that give a rapid gain in observable outcomes, over longer-term more sustainable gains.

A further limitation of findings from systematic reviews is that they are sometimes applied with insufficient attention to the contextual factors that contributed to the success or ineffectiveness of a

[11] See for example, The Education Commission (2019) Transforming the education workforce: learning teams for a learning generation. The Education Commission; New York

[12] Global Education Evidence Advisory Panel (2020) Cost effective approaches to improve global learning. https://live.worldbank.org/smart-buys

[13] See for example: Snilstveit, B., Stevenson, J., Phillips, D., Vojtkova, M., Gallagher, E., Schmidt, T., Jobse, H., Geleen, M., & Grazia Pastorello, M. (2015). Interventions for improving learning outcomes and access to education in low- and middle- income countries: a systematic review. International Initiative for Impact Evaluation (3ie).

[14] Mourshed, M. Barber, M. & Chijoke, C. 2010 "How the world's most improved school systems keep getting better." Washington D. C.: McKinsey

particular intervention. Qualitative methods and critical approaches are needed to compliment more quantitative evidence to understand what works, for whom and under what circumstances.

Systematic reviews require common, quantitative outcomes, with literacy and numeracy assessment scores becoming the predominant indicators of education quality used. They rarely provide information about what works to improve other aspects of quality such as non-cognitive skills, inclusion and student well-being. This strategic guidance recognises that, in order to provide an inclusive and quality education, teachers need to be able to develop in learners a broad skill set including 21st century skills and skills for sustainable development (see SDG target 4.7). New internationally comparable measures of skills such as ICT skills and knowledge of environmental science and geoscience are being collected at the global level, but data are still limited.[15] . Non-cognitive skills such as team working, critical thinking, acceptance and understanding of diversity are harder to measure.[16] It further requires teachers to be able to create a safe and inclusive classroom atmosphere, where the contributions of each individual child are respected, and their individual learning needs met. These other desired outcomes of education and learning should also be taken into account.

Systematic reviews tend to favour evidence from contexts where it is easier to conduct experimental research, with the evidence in developing country contexts often dominated by studies from relatively stable middle-income countries such as Brazil, Kenya, India, and South Africa, and evidence from low income and crisis affected contexts underrepresented.

Given the limitations of the evidence base covered by systematic and rigorous evidence reviews, this section also includes evidence from more policy focused/ less rigorous global reviews,[17] along with more normative discourse.

Teacher policies and systems reform

SDG 4.c articulates a global commitment to increasing the supply of qualified teachers. But in order for this to translate into improvements in the quality and availability of education, policy makers need to go beyond a narrow focus on the supply of qualified teachers. This is also the direction in the Incheon Declaration and the Education 2030 Framework for Action.[18] Policy reform and planning should also consider whether;

- training and accreditation systems ensure that qualified teachers have the skills and competencies necessary to teach effectively and inclusively;
- teacher recruitment is based on qualifications;
- teacher deployment is equitable;
- teacher working and employment conditions motivate and enable them to put their skills into practice, and
- qualified teachers are provided with ongoing professional development opportunities to refresh, update and advance their competencies.

[15] See data.uis.unesco.org

[16] For a comprehensive list of 21st Century skills see Joynes, C., Rossignoli, S., & Fenyiwa Amonoo-Kuofi, E. (2019). 21st Century Skills: Evidence of issues in definition, demand and delivery for development contexts (K4D Helpdesk Report). Brighton, UK: Institute of Development Studies https://assets.publishing.service.gov.uk/media/5d71187ce5274a097c07b985/21st_century.pdf

[17] Save our Future (2020) Averting an Education Catastrophe for the World's Children.

[18] UNESCO (2016). SDG4-Education 2030, Incheon Declaration and Framework for Action for the Implementation of Sustainable Development Goal 4, Ensure Inclusive and Equitable Quality Education and Promote Lifelong Learning Opportunities for All. https://unesdoc.unesco.org/ark:/48223/pf0000245656

In order to be scalable and sustainable, interventions and reforms that seek to address any of the above need to be integrated into education system reform processes,[19] ideally through the development of and inclusion in clear, coherent teacher policies. The Teacher Task Force's *Teacher Policy Development Guide*[20] highlights the need for the development of comprehensive teacher policies that are aligned with the overall education policy, as well as with other national priorities and policies. It presents a comprehensive evidence-based tool that comprises nine interrelated dimensions that countries can use to develop their national teacher policy, with principles and detailed approaches for contextualising, sequencing and implementing national teacher policy reforms.

Figure 1: Dimensions of teacher policy identified by the UNESCO International Task force on Teachers for Education 2030

Teacher recruitment and retention	Career structures/ paths	Teacher standards
Teacher education (initial & continuing)	Teacher employment and working conditions	Teacher accountability
Deployment	Teacher reward and remuneration	School governance

Political commitment to improving learning for all and to teachers as key agents of change.

Evidence-based Interventions, designed to improve learning for all, are difficult to integrate into systems reform in contexts where there is a lack of system alignment, together with political commitment to equitable learning.[21] Powerful individuals or groups can compromise reforms to make them serve their own personal or political interests.[22] Sustained system reform requires high level ownership and commitment to reform,[23] not just from education ministers, but also from the heads of government.[24] Even when countries put in place comprehensive teacher policies, they often do not have the capacity or resources to implement it. Unfortunately, several education systems in low- and middle-income countries are focused on providing a very high standard of education for a minority of elites and high performers. This can come at the expense of the learning of the majority of children.[25] Powerful individuals or groups can compromise reforms to make them serve their own personal or political interests.[26] The international community can support sustainability of reforms by

[19] Aslam, Monazza and Shenila Rawal (OPERA). 2019. "Political Economy of the Education Workforce." Background Paper for Transforming the Education Workforce: Learning Teams for a Learning Generation. New York: Education Commission.

[20] UNESCO International Task force on Teachers for Education 2030 (2015). *Teacher policy development guide.* Paris: UNESCO.

[21] Global Education Evidence Advisory Panel (2020)

[22] See chapter 10 of World Bank (2018). "Learning to Realize Education's Promise. World Development Report 2018." A World Bank Group Flagship Report. https://www.worldbank.org/en/publication/wdr2018

[23] Aslam, Monazza and Shenila Rawal (OPERA). 2019. "Political Economy of the Education Workforce." Background Paper for Transforming the Education Workforce: Learning Teams for a Learning Generation. New York: Education Commission.

[24] Global Education Evidence Advisory Panel (2020)

[25] Global Education Evidence Advisory Panel (2020)

[26] See chapter 10 of World Bank (2018). "Learning to Realize Education's Promise. World Development Report 2018." A World Bank Group Flagship Report. https://www.worldbank.org/en/publication/wdr2018

drawing reform leaders into high-visibility commissions or expert panels at the global level and providing networking and knowledge sharing regionally and internationally.[27]

Critical to any successful education policy reform is recognizing teachers as agents of change by harnessing their expertise, experience and motivation and encouraging them to drive through progressive change. Teachers, and teacher unions can act as champions of reforms when they are involved in the development of education policies from the conceptualization and throughout the process. Engaging teachers and their unions in social dialogue processes at an early stage of policy development can help to build trust, buy-in and successful implementation.[28] Effective implementation requires a phased roll out and iterative adaptation based on monitoring and feedback from teachers and other stakeholders implementing the reform.[29]

The "Save our Future" white paper[30] emphasises the need to involve teachers in decision making processes from a rights-based perspective, and to ensure that teacher expertise and experience is used to inform education reform design and implementation. This is also a position that has long been advocated by Education International. There is also emerging evidence that giving teachers and school leaders a voice on policy reforms is associated with higher professional motivation and successful implementation.[31]

Teacher selection and recruitment. Among high income countries, those with the highest performing education systems tend to have highly selective teacher recruitment processes.[32] There is very little robust evidence from experimental studies into effective strategies for teacher selection in low and middle-income countries. [33] Simply raising the academic qualification requirements to enter teaching can be counter-productive if the pool of potential candidates is too limited.[34]

A first critical step in improving the teacher recruitment processes is to ensure that it is based on clear and transparent standards and merit rather than nepotism, patronage and/or politics.[35] Qualifications are the most commonly used indicator of merit used in teacher selection and is the best proxy we currently have, but where there is weak regulation and quality control of certificating bodies, qualifications alone may not be a guarantee of a candidate's competencies in core skills and basic teaching knowledge.[36] Evidence from Mexico indicates that requiring candidates to complete a test can be effective at improving the competencies of those selected. [37]

Employing new teachers on probationary contracts, and only making contract permanent on the basis of performance during the first year, could help to select out qualified but low performing

[27] Aslam and Rawal (2019)
[28] See chapter 11 of World Bank (2018).
[29] Aslam and Rawal (2019) and chapter 11 of World Bank (2018).
[30] Save our Future (2020) Averting an Education Catastrophe for the World's Children.
[31] Naylor et al. (2019)
[32] Naylor, R, Jones, C. and Boateng, P. (2019). "Strengthening the Education Workforce." Background Paper for Transforming the Education Workforce: Learning Teams for a Learning Generation. New York: Education Commission
[33] Global Education Evidence Advisory Panel (2020)
[34] Naylor et al. (2019)
[35] Global Education Evidence Advisory Panel (2020)
[36] Naylor et al. (2019)
[37] Global Education Evidence Advisory Panel (2020)

teachers,[38] and has been found to be effective in Kenya.[39] It can, however, be abused by authorities, so it should be considered carefully.

Selection of teachers should represent the diversity of the population including ethnicity and gender.[40] For instance, in a multilingual society where mother-tongue based instruction or bi- or multilingual education is practiced, it is important that the teacher can speak the primary language of the learners, especially at the lower grades.[41] In terms of gender, at the global level most primary school teachers are female (67%). However, in low-income countries females are underrepresented in the primary school teacher workforce (42%) and are often concentrated in urban centres, meaning that there is often a shortage of female teachers in rural and underserved areas.[42] At secondary level, only a quarter (25%) of teachers in low-income countries are female.[43] Even where females make up the majority of teachers, they are often underrepresented at school leadership levels.

Initial teacher education.[44] Evidence regarding the training of teachers in formal basic education in low and middle-income contexts indicates that effective initial teacher training (ITT) programmes should do the following:[45]

- Ensure that students have robust subject and pedagogical/method knowledge, through testing and additional support where necessary.
- Include a significant amount of school-based teaching practice throughout the course.
- Align to the curriculum to be taught and the context.
- Ensure courses are inclusive in terms of trainee accessibility, course content and teacher educators (for example, include distance modalities, make courses accessible to underrepresented groups such as people with disabilities, include training on inclusion, give students opportunities to interact with people with disabilities)
- Ensure that teacher educators have relevant school experience. (For example, educators of primary school teachers should have primary teaching experience).

Increasing the length or level (for example, from diploma to degree) of certified teacher education courses does not necessarily lead to improved teaching, but is often one necessary element.[46] Some ITT courses, particularly in contexts of crisis or forced displacement, can be too short, lasting only a few days or weeks.[47] Fast track training routes, when combined with low academic entry criteria, can have long term negative consequences for the quality and professional status of teachers.[48]

Pedagogic and didactic skills are also clearly important, but more difficult to measure. Pedagogic skill training is most effectively delivered with a high level of practice integrated throughout the training course. Pedagogic content knowledge, that is the specific pedagogic techniques needed for effective teaching of specific subject areas, needs to be developed, alongside more generic pedagogic skills.

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[38] Naylor et al. (2019)
[39] Global Education Evidence Advisory Panel (2020)
[40] Naylor et al. (2019)
[41] UNESCO (2016) If you don't understand, how can you learn? Global Education Monitoring Report Policy Paper 24, February 2016. Available at https://unesdoc.unesco.org/ark:/48223/pf0000243713
[42] 2020 data from http://data.uis.unesco.org/
[43] 2019 UIS estimate from http://data.uis.unesco.org/ (2020 data not available)
[44] Also note: a global framework of Professional Teaching standards has been developed by Education International and UNESCO, see https://issuu.com/educationinternational/docs/2019_ei-unesco_framework?fr=sYTQ5MDQxMzY3Ng
[45] Naylor et al. (2019)
[46] Ibid.
[47] Richardson, E., MacEwan, L. and Naylor, R. (2018). Teachers of Refugees: a review of the literature. Reading: Education Development Trust and IIEP UNESCO
[48] Naylor et al. (2019)

Even though the evidence is lacking, attention must be paid to pedagogy along with subject knowledge. One without the other – particularly in low resource settings – will not suffice. Initial teacher training courses tend to assume that students in pre-service teacher education programs have basic competencies and subject content knowledge (including in literacy, numeracy and fluency in the language of instruction) and therefore do not focus on developing these skills. However, low admission criteria and/or shortage of well-educated applicants to pre-service teacher education programmes can mean that teachers' competencies in these areas need developing.

Teachers need to be equipped with ICT skills and skills and knowledge delivering education using technology. Given that these skills need to develop with rapidly developing technology, they need to be included both in pre-service training and professional development courses (see below). Teachers are increasingly needing such skills as part of normal classroom teaching, as ICT hardware and infrastructure become more widely available. But as demonstrated by the COVID-19 crisis, equipping teachers with such skills can help to build the resilience of education systems by enabling teachers to continue teaching remotely when schools close.

As well as equipping teachers to deliver the academic curriculum effectively, initial teacher training and ongoing professional development needs to ensure that teachers develop and understand the ethical standards of the profession,[49] together with the techniques required to put such standards into practice. For example, the use of corporal punishment in schools violates child protection standards. It is associated with lower academic achievement, slower cognitive development, behavioural problems and student absence and dropout.[50] However, corporal punishment remains prevalent across several regions in the world, including countries where such practices are banned by law.[51] The evidence base on how to reduce violence in schools is limited, although there are some studies indicating that teacher training and coaching can reduce teacher violence.[52] Similarly, school related gender-based violence (SRGBV) including trading sex for grades is prevalent in some countries.[53] A synthesis by UNESCO[54] of case studies of 8 countries[55] with a proven track record of reducing or maintaining low levels of school violence (including gender-based violence), concluded that positive discipline, including strengthening of teachers' skills in classroom management, together with the skills to prevent and respond to school violence and bullying, should be incorporated in teacher training.

Management of unqualified teachers

Many education systems include large proportions of unqualified (or under-qualified) and untrained teachers within their teacher workforces. The UNESCO Institute for Statistics estimates that around a quarter of primary school teachers in low-income countries do not meet the minimum required qualifications, and in some countries (for example, Madagascar) the majority of teachers are unqualified.[56] In some cases, these teachers have been included on the national teacher pay roll. In other cases, these teachers are paid by the schools but sometimes funded indirectly by the government through school grants. In some countries, especially in Western and Central Africa, a large proportion of teachers in the public sector are contract teachers. They typically have lower

[49] See EI's Declaration on Professional Ethics EI Declaration on Professional Ethics (ei-ie.org)
[50] http://endcorporalpunishment.org/wp-content/uploads/research/Research-effects-summary-2016-06.pdf
[51] https://www.end-violence.org/sites/default/files/paragraphs/download/UNESCO%20Behind%20the%20Numbers.pdf
[52] Global Education Evidence Advisory Panel (2020),
[53] UNESCO (2020) Global Education Monitoring Report. Gender Report. A new generation:25 years of efforts for gender equality in education. Paris, UNECSO
[54] https://www.end-violence.org/sites/default/files/paragraphs/download/UNESCO%20Behind%20the%20Numbers.pdf
[55] Eswatini, Italy, Jamaica, Republic of Korea, Lebanon, Netherlands, Sweden and Uruguay.
[56] UIS estimates for 2017, data extracted from http://data.uis.unesco.org/

initial qualifications and receive less continuous professional development opportunities.[57] Governments with large numbers of unqualified teachers in the workforce need to consider how to upgrade the skills of such teachers to enable them to become qualified. Unqualified teachers unwilling or unable to reach the minimum qualifications need to be managed out of the system or into alternative teacher assistant roles.

A review of strategies to improve the performance of such teachers concluded that no one strategy had been shown to directly improve performance. But a combination of training workshops, independent study and in-class support by a mentor, followed up by structured peer learning activities (in school or in school clusters) were successful.[58]

Teacher professional development and pedagogical support is necessary for improving the quality of teaching, but the evidence base on how in-service teacher training programmes can be delivered in a cost-effective way in low- and middle-income contexts is limited and inconsistent. What is evident is that training that is generalised, off site, one-off and overly theoretical is not cost-effective. [59] In-service training can be effective when it is an integral part of a well-evidenced pedagogical reform. [60] For training to be effective it needs to be of sufficient duration and quality and teachers may need on-going support.[61] While evidence from lower and middle income countries is scarce, a metareview of randomised control trials conducted mainly in high income economies (predominantly UK and USA) found that high-quality continuous professional development has a significant effect on pupil's learning outcomes, and was cost-effective when compared to other interventions such as performance related pay, extending the school day and one-to-one tutoring. In addition, the study noted that continuous professional development programmes tended to be viewed much more positively by teachers compared to other interventions.[62]

Access to professional development opportunities is an important element for ensuring that career progression within the education sector works effectively to increase teacher motivation and retention.[63] It is important that professional development programmes are designed to be accessible to all teachers, including female teachers with childcare responsibilities and teachers with disabilities. Where only a selection of teachers is given training, equity and diversity should be taken into account in the selection process. Targeted leadership training and coaching for female teachers can be used as a strategy to address shortages of female school leaders, alongside other strategies to support their appointment, deployment and development as leaders.

In very low-capacity situations where classroom teachers lack core competencies, providing teachers and other learning facilitators with evidence-based structured pedagogy, such as scripted lesson plans or instructional guidelines in the form of videos or simplified text, can be a cost-effective way to improve learning outcomes in the immediate short-term. [64] Scripted lesson plans are, however,

[57] https://teachertaskforce.org/knowledge-hub/review-use-contract-teachers-sub-saharan-africa
[58] See for example Orr, D., Westbrook, J., Pryor, J., Durrani, N., Sebba, J., & Adu-Yeboah, C. (2013). What are the impacts and cost-effectiveness of strategies to improve performance of untrained and under-trained teachers in the classroom in developing countries? London: EPPICentre, Social Science Research Centre, Institute of Education, University of London.
[59] Global Education Evidence Advisory Panel (2020)
[60] Ibid.
[61] Snilstveit, et al. (2015).
[62] Fletcher-Wood, H. and Zuccollo, J. (2020). The effects of high-quality professional development on teachers and students: A rapid review and meta-analysis. London, Education Policy Institute
[63] Crehan, L. (2016) Exploring the impact of career models on teacher motivation. Paris; UNESCO
[64] Global Education Evidence Advisory Panel (2020), Save our Future (2020), Snilstveit, et al. (2015).

controversial because they may undermine teacher autonomy and professionalism in the longer term.[65]

Access to quality professional development is important for supporting teachers to develop skills not covered in initial teacher training, to enable them to adapt to changes in curriculum, policy, technology or to respond to emerging crises. For example, during the COVID-19 school closures, it was clear that teachers needed additional training to enable them to deliver teaching at a distance and use ICT to keep in contact with their students, as well as guidance on how to provide psychosocial support, and to respond to learning loss.

There is a growing body of evidence that providing teachers with instructional leadership, through school leaders or other expert education professionals, can improve teacher performance and lead to improved learning outcomes. Effective instructional leadership involves first accurately diagnosing problems with teachers' classroom practices through observation and listening to teachers' self-identified needs, then suggesting evidence-based teaching strategies to address the problems identified, and finally monitoring how teachers implement the strategies.[66] Peer learning and coaching by more experienced teachers are also approaches that have been found to be effective in some low and middle income contexts.[67]

It is particularly important that newly qualified teachers are supported in their first years as a teacher, as teacher attrition rates tend to be highest during this period. High performing systems in high income settings provide newly qualified teachers with mentoring. But evidence on the effectiveness of teacher induction programmes in low- and middle-income contexts is limited.[68]

Additional workforce roles such as specialist teachers and learning support staff have been found to be effective in supporting teachers to reach those left behind and enabling inclusion in high income contexts but here is very limited evidence on the effectiveness of these approaches in lower- and middle-income contexts.[69]

Teaching resources

After a motivated and well-prepared teacher, ensuring a sufficient quantity of quality textbooks is one of the most effective ways to improve learning. [70] Learner access to good quality textbooks is particularly important in contexts with large class sizes, limited instructional time and underqualified teachers. Where textbooks are not available to learners, a large proportion of lesson time is spent copying content from the blackboard.

However, it should be noted that when textbooks and other written learning resources are present in schools, they are not necessarily made available to learners.[71] Provision of teaching and learning materials to schools, such as textbooks and libraries, when not part of an integrated programme of pedagogical reform, rarely appears to have a positive impact on learning outcomes.[72] Similarly,

[65] Naylor et al. 2019
[66] Ibid.
[67] Ibid
[68] Ibid
[69] Save our Future (2020)
[70] Global Education Monitoring Report (2016) Policy Paper 23: Every child should have a textbook. https://unesdoc.unesco.org/ark:/48223/pf0000243321
[71] Ibid
[72] Global Education Evidence Advisory Panel (2020); Snilstveit, et al. (2015); Samoff, J. Leer, J, and Reddy, M. (2016) Capturing complexity and context: evaluating aid to education. Expertgruppen för biståndsanalys; Stockholm

supplying computer hardware, when not as part of a coordinated approach, (for example, combined with pedagogical software and training) is expensive and unlikely to significantly improve learning outcomes. [73] But it should be noted that where teachers lack the absolute basics, such as blackboards, provision of these items, unsurprisingly, leads to significant improvements in education outcomes.[74]

Reviews of strategies for improving education in developing contexts have come to different conclusions regarding the effectiveness of the use of digital technologies in teaching. One review concluded that computers, as a teaching and learning resource, do *not* work across most contexts.[75] However, digital technology can be used in a multitude of ways to support teaching, with some applications more effective than others. For example, when technology is used for scaling up standardized instruction evidence suggests that content and context is decisive. This is typically most beneficial where schools are understaffed, or teachers are absent or have low competencies.[76] Software for computer-adaptive learning has shown high promise in terms of closing the learning gap,[77] and is identified as a "good buy", with the caveat that this only holds in contexts where hardware is already in schools. [78] A sudden change in the use of technology can, however, hinder rather than support instruction and learning. This depends on the teacher's and student's skills and attitude for taking up and adapting to the new technology.[79] How this has changes during Covid-19 is still not clear.

Teacher remuneration and contract conditions

Whilst the evidence of the impact of increasing teacher wages is mixed,[80] and in some cases has had very little impact on learning,[81] several reviews[82] emphasise the prerequisite that teachers should be paid a decent and living wage, reliably and on time before other reforms are likely to be effective. [83]Whilst salaries are the main form of teacher compensation, teachers are often compensated for

[73] Global Education Evidence Advisory Panel (2020).
[74] Glewwe, P., Eric A. Hanushek, E., Sarah D. Humpage, S., and Renato Ravina, R. (2011) School Resources and Educational Outcomes in Developing Countries: A Review of the Literature from 1990 to 2010 NBER Working Paper No. 17554 October 2011
[75] Snilstveit, et al. (2015).
[76] Brookings (Ganimian, Vegas, Hess), September 2020: *Realizing the promise: How can education technology improve learning for all?*
[77] Brookings (Ganimian, Vegas, Hess), September 2020: *Realizing the promise: How can education technology improve learning for all?;*
Rodriguez-Segura, University of Virginia, August 2020: *Educational Technology in Developing Countries: A Systematic Review*
[78] Global Education Evidence Advisory Panel (2020).
[79] Rodriguez-Segura, University of Virginia, August 2020: *Educational Technology in Developing Countries: A Systematic Review*
[80] Snilstvelt et al. (2015)
[81] Global Education Evidence Advisory Panel (2020).
[82] See for example Save our Future (2020) Averting an Education Catastrophe for the World's Children, and Tournier, B. and Chimier, C. (2019) Teacher career reforms: learning from experience. UNECSO IIEP; Paris http://www.iiep.unesco.org/en/teacher-career-reforms-learning-experience-13308
[83] See also ILO/UNESCO (1966) Recommendation concerning the Status of Teachers 1966 https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/normativeinstrument/wcms_493315.pdf

their work with other monetary (for example, stipends) and non-monetary (for example, housing, medical care, bicycles) incentives, especially in underserved areas or crisis-affected contexts.[84]

Monitoring teacher attendance without paying attention to incentives does not seem to improve teacher attendance or learning.[85] But attempts to link incentives to teacher attendance and performance are politically challenging and often fail.[86]

Evidence indicates that unqualified teachers employed on short term contracts sometimes can improve learning outcomes in the short-term, and help as a strategy for increasing local recruitment in areas with teacher shortages. But in the long-term, such approaches can undermine the professionalization of teaching and have a negative impact on learning.[87] Contract teachers are also frequently paid much less than traditional civil servants and this can have additional implications. In the Covid-19 context, in some low-income countries neither public sector nor private sector teachers got paid. This had implications for morale, motivation, attrition etc.[88]

An area of debate among many multilateral and bilateral donors is the question of whether official development assistance, including humanitarian aid, should be used to cover teacher salary costs. A key objection to the use of aid to cover teacher salaries is that these costs are recurrent and cannot be sustained through external donor funding. Donors tend to avoid funding teacher salary costs. However, there are some exceptions. In contexts where donors consider that national administrations are unlikely to be able to pay teacher salaries (for example, Somalia, South Sudan, Yemen) some donors, including multilaterals like GPE and ECW, have agreed to cover teacher "incentives". Some donors have also funded salaries of teachers of refugees- either through the national government, or through the UNHCR. This guidance does not cover the detailed arguments and evidence for and against the use of aid to cover teacher salary costs, as this question needs to be considered in the broader contexts of funding modalities and achieving the right balance between short and long term goals of aid.

Supply and distribution of teachers.

For systems to plan how many teachers need to be trained and recruited, policy makers need to decide an optimal class size: balancing the high costs of small classes with the impact that reducing class size can have on the quality of education and learning outcomes. Alongside policies regarding teacher contact time,[89] class size will determine the target pupil teacher ratio, and hence the number of teachers that a system needs to employ. Evidence from high income contexts, where class sizes tend to be in the range of 15-30, indicate that reducing class size within this range has only a moderate impact on learning for a high cost.[90] However, the gains can be more significant in contexts where typical class sizes are larger. One rigorous review of the impact of policies and programmes in developing countries identified reducing pupil-teacher ratios as one of the most effective strategies

[84] INEE (2009) INEE Guidance notes on teacher compensation in fragile states, situations of displacement and post-crisis recovery. INEE.
https://inee.org/system/files/resources/INEE_Guidance_Notes_Teacher_Compensation_EN.pdf
[85] Damon, A., Glewwe, P. Wisniewski, S. and Sun, B. (2016) Education in developing countries: what policies and programmes affect learning and time in school? Expertgruppen för biståndsanalys; Stockholm.
[86] Global Education Evidence Advisory Panel (2020).
[87] Naylor et al. (2019)
[88] https://teachertaskforce.org/blog/how-covid-19-pandemic-affecting-contract-teachers-sub-saharan-africa
[89] the proportion of a school day that teachers should be in front of classes
[90] Education Endowment Fund (2018) teaching and learning toolkit: reducing class size.
https://educationendowmentfoundation.org.uk/evidence-summaries/teaching-learning-toolkit/reducing-class-size/

for improving learning outcomes.[91] However a review of costed reforms concluded that investment in additional teachers alone, without complementary strategies to ensure that they are utilised effectively, was not cost effective.[92]

Several studies have identified supplemental instruction as an effective strategy for increasing learning outcomes. [93] If delivered by qualified teachers, this strategy would increase the teacher workload. Where the teacher workforce is fully utilised, this would require additional qualified teachers to implement. It should also be noted that the emergence of private supplementary education (tutoring etc.) can have negative implications for teachers and learners.[94]

Given that the teacher payroll often constitutes the largest part of an education budget, it is important for education systems to utilise their teaching resource in an efficient, effective and equitable way. When teachers are not distributed evenly across the country, this can lead to underutilisation in some areas and overcrowded classes in others. Evidence suggests that more qualified teachers tend to work in more advantaged schools with smaller classes and more privileged children, exacerbating existing inequalities.[95] Attracting and retaining teachers to work in underserved areas is a common challenge across many systems. Use of carefully targeted incentives can be an effective solution in the short term.[96] Providing certificated routes into teaching for young women and men from underserved areas and language communities provides a longer-term solution to ensuring that schools serving those communities have qualified teachers.[97]

Ensuring that small rural secondary schools have access to subject specialist teachers can be a particular challenge. Strategic use of geographic information systems data and technology can be used to identify how specialist expertise can be shared across schools.[98] Recent research using geospatial analysis that maps out district's teachers, provided information on how schools can develop plans to share teachers with needed qualifications in teaching mathematics and science. It can also be used to address inequities in other areas of deployment.[99] Broadcasting technology can also help with sharing subject or pedagogical specialists across schools remotely.[100]

Trainers in the TVET sector

The TVET sector is very complex including a multitude of longer and shorter courses, formal and non-formal, in educational institutions and in companies. Skills required range from very basic artisan or agricultural skills to more specialised skills for qualifications according to international standards in various fields. Trainers and instructors need support to acquire skills relevant to the level they are training, both updated knowledge on subject and on pedagogy.

UNESCO's 2015 Recommendation concerning technical and vocational education and training (TVET) recognizes the crucial role of teaching and training staff in assuring quality and relevance of TVET,

[91] Damon, A., Glewwe, P. Wisniewski, S. and Sun, B. (2016) Education in developing countries: what policies and programmes affect learning and time in school? Expertgruppen för biståndsanalys; Stockholm.
[92] Global Education Evidence Advisory Panel (2020), based on studies in India and Kenya.
[93] See for example, Damon et al. (2016),
[94] https://teachertaskforce.org/knowledge-hub/shadow-education-africa-private-supplementary-tutoring-and-its-policy-implications
[95] Save our Future (2020)
[96] Save our Future (2020)
[97] Save our Future (2020)
[98] Ibid.
[99] https://teachertaskforce.org/fr/node/1028
[100] The Education Commission (2019)

and states that 'policies and frameworks should be developed to ensure qualified and high-quality TVET staff, including teachers, instructors, trainers, tutors, managers, administrators, extension agents, guidance staff and others'.[101] Implementing such a recommendations is particularly challenging, given that assuring the relevance of TVET requires that TVET staff are able to continuously update their knowledge to ensure that training remains relevant to the rapidly changing labour market. A further challenge relates to the diversity of actors engaged in TVET training, including those listed above and ministries of labor. This diversity of actors means that consolidating evidence on effective policies and practice in the management of TVET staff is difficult. This results in evidence gaps[102] and a heavy reliance on applying evidence of what works for school teachers to the TVET sector.[103]

A study on the futures of TVET teaching,[104] based primarily on the views of expert practitioners and policy makers, identifies the need for teachers and trainers to develop future-oriented skills and to be self-directed learners in order to update their content knowledge, and recommends that in-service training should be linked to career progression. The study recommends that trainers and teachers, should have industry experience and exposure before and during their careers in TVET. It also recommends that private sector industries should have a key role to play in the training and certification of TVET staff. As for school teachers, TVET trainers should have training on gender responsive and inclusive methods. In line with studies on the school education workforce, the study recommends that TVET teaching staff should be engaged in TVET policy making.

Teaching and teachers in crisis and low resource contexts.

As noted above, the evidence base from what works in low income and crisis affected contexts is very limited, and tends to be omitted from rigorous and systematic reviews. But strategies shown to be effective elsewhere may not be viable in low resource or humanitarian settings, or may have unintended negative consequences. For example, policies requiring all those participating in teaching activities to be fully qualified can limit the operation of education providers where the supply of qualified teachers is severely limited, such as in contexts of forced displacement or remote communities. The limited evidence base on the impact of professional development on improving learning in such contexts, combined with often minimal national investment and the challenges delivering long term development assistance means that professional development programs for teachers are often lacking in-spite of the huge needs.[105] Meeting urgent, immediate needs for adequate numbers of teachers and instructors may temporarily need to be prioritized over longer-term investments such as improving the quality and capacity of initial teacher training systems. Strategies such as the use of scripted lesson plans, whilst less appropriate in contexts with qualified teachers, may be an appropriate strategy to meet the immediate need for quality instruction, whilst the capacity of the teacher workforce is being built.

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[101] UNESCO (2015) Recommendation concerning technical and vocational education and training (TVET). Paragraph 35. https://en.unesco.org/themes/skills-work-and-life/tvet-recommendation

[102] See for example, International Initiative for Impact Evidence (3ie) (2021) Youth and Transferable Skills Evidence Gap Map. Accessed from https://gapmaps.3ieimpact.org/evidence-maps/youth-transferable-skills-evidence-gap-map 26th Feb 2021.

[103] See for example, evidence sources cited in UNESCO-UNVOC (2020) Study on the trends shaping the future of TVET teaching. UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training

[104] UNESCO-UNVOC (2020) Study on the trends shaping the future of TVET teaching. UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training

[105],Burns, M. & Lawrie, J. (Eds.). (2015). Where It's Needed Most: Quality Professional Development for All Teachers. New York, NY: Inter-Agency Network for Education in Emergencies.

Teachers in crisis contexts may need additional training in specialist skills to help them manage the challenges related to the crisis. These can include psychosocial support strategies, health education, mine-risk awareness, self-protection from sexual and gender-based violence and exploitation.[106] In contexts of forced displacement contexts (both refugees and IDPs), teachers may be faced with challenges of integrating large numbers of learners from different backgrounds and with different languages into their classes, and need additional training as well as assistants to manage these challenges.[107]

3. Norwegian policy positions regarding how Development aid should be best used to support quality teachers and teaching.

In line with the SDGs, Norad/ Norway is working towards a world in which every school-aged child is taught by qualified teachers with the skills, support, and motivation to adapt their teaching to each child's individual learning needs. And where youth and adults have access to foundational skills and vocational education and training delivered by qualified trainers. In light of the evidence and discourse presented in section 2 above, Norad/ Norway considers the following as key factors to be taken into account when considering how development aid should be used to support quality teachers and teaching.

Teacher policies and systems reform

Norway will advocate for/promote programs that:

- are based on a thorough analysis of the education system and integrated into wider system reform and policy change processes.

Norway recognizes that interventions targeted at teachers should be part of a comprehensive teacher policy. Norway will therefore promote:

- Development of comprehensive teacher policies, possibly as part of education sector plans where this is relevant.
- The application of global tools and guidance such as the International Task Force on Teachers *Teacher Policy Development Guide*[108]; and the Interagency Network for education in Emergencies (INEE) *Minimum Standards* relating to teachers and other education personnel.[109]
- Working within existing national policies and aligned to national priorities. Where these policies exclude marginalised groups, are discriminatory or are not evidence-based, Norway will work with governments and partners to pursue policy reform, and work with partners to secure education for all.

Political commitment to education and to teachers.

Norway will seek to support partnerships and programmes that:

[106] See for example INEE & Teachers in Crisis Contexts (2016) Teachers in Crisis contexts Training for primary school teachers. https://inee.org/resources/teachers-crisis-contexts-training-primary-school-teachers
[107] Richardson, E., MacEwan, L. and Naylor, R. (2018). Teachers of Refugees: a review of the literature. Reading: Education Development Trust and IIEP UNESCO
[108] https://teachertaskforce.org/knowledge-hub/teacher-policy-development-guide
[109] https://inee.org/standards/domain-4-teachers-and-other-education-personnel

- Seek to identify and work closely with high level leaders and coalitions that champion education reforms that support equitable learning and promote equity in society.
- Include teachers and their representative organizations in the design, piloting and feeding back on interventions and policy reforms.
- Promote the recognition and status of the teaching profession

Teacher selection and recruitment

Norway will seek to support partnerships and programmes that:

- Ensure that recruitment and career progression processes are merit-based, equitable and inclusive.
- Promote gender equality in the teacher workforce, as well as enabling people with disabilities, minority language speakers and other underrepresented groups to become qualified teachers.

Initial teacher education.

Norway will seek to support partnerships and programmes that:

- Seek to improve and quality assure Initial Teacher Training/Education programmes. This should include consideration of entry criteria, training content, quality and relevance, extensive school-based practice. Promote use of ISCED-T when approved.
- Support the development and quality assurance of the teacher qualification process.
- Ensure that teachers are trained on gender equality and gender-transformative pedagogy.

Teacher professional development and pedagogical support

Norway will seek to support partnerships and programmes that support:

- Induction and support for newly qualified teachers
- Teacher upgrading programmes that enable unqualified teachers to become certified.
- Continuous professional development as integrated element of wider reforms and interventions, and which leads to certification in cases where teachers are not certified
- Strategies to ensure that female and male teachers are given equal opportunities to professional development, career advancement and pay.
- Provision of responsive teacher professional development to meet emerging skill gaps during crises.

Norway will seek to avoid funding programmes and interventions that include

- Short courses that are not part of a more systematic qualification/certification program, except where these are needed as a response to a crisis or changes in curriculum, policy or technologies available in school.
- Scripted lessons without pathway to move away from highly structured pedagogy

Teaching resources

Norway will support

- provision and development of learning materials as part of broader interventions
- evidence based use of education technology to support teachers and teaching

Norway will seek to avoid funding programmes and interventions that include

- provision of teaching aids that are not part of an integrated programme of pedagogical reform

Teacher remuneration, contract conditions and other incentives[110,111]

- Norway will advocate for decent teacher salaries and support our partners to negotiate with Ministry of Education and Ministry of Finance for this.
- Norway will advocate and support sustainable and equitable financing mechanisms to enable low income and crisis affected countries to pay teacher salaries.
- Norway will also pay attention to other necessary incentives for teachers.
- Norway will work with its partners to consider carefully where and when it is appropriate to cover teacher salaries or incentives through aid.
- Norway will support context relevant strategies that promote gender equality and prohibit discrimination, gender-based violence, sexual exploitation and abuse of colleagues and learners, alongside appropriate disciplinary procedures for teachers, including development of teacher codes of conduct where needed.
- Norway will advocate for capacity building of teacher unions to engage in effective social dialogue

Supply, deployment and distribution of teachers.

Norway will seek to support partnerships and programmes that:

- Strengthen the education profession by ensuring that all teachers and instructors in education and training institutions are fully qualified, or on a pathway towards a qualification.
- Develop better national data on teacher qualifications, training needs, distribution and utilisation
- Support the development of internationally comparable data on teachers, including development and continued work on ISCED-T.
- Invest in data systems such as TEMIS as well as systems that generate geographical data on school level qualified teacher-student ratios.
- Develop strategies and policies that support the equitable distribution of qualified teachers, and
- Invest in certificated teacher training programmes that target and are adapted to the needs of candidates from underserved communities.

Norway will seek to avoid

- Parallel data collection
- Investment in teacher data collection systems that put the data needs of development partners above those of the national education systems

[110] Recommendation concerning the Status of Teachers, 5 October 1966 (ilo.org)
[111] Teacher Task Force calls to support 63 million teachers touched by the COVID-19 crisis (unesco.org)

Trainers in the TVET sector

Norway will seek to support partnerships and programmes that:

- support TVET staff to continuously update their knowledge to ensure that training remains relevant to the rapidly changing labour market.
- ensure that TVET staff have industry experience and exposure before and during their careers in TVET
- ensure TVET staff have pedagogical training
- involve private sector industries in the training and certification of TVET staff
- show flexibility in the training, upgrading and certification of trainers and instructors to meet qualification needs in both formal and non-formal TVET and in work-based learning.

Teaching and teachers in crisis and low resource contexts.

Norway will seek to support partnerships and programmes that:

- Ensure that all children can have access to quality instruction, but that also support the long-term development of a qualified teaching profession of sufficient quantity and quality through more training and/or more equitable deployment.
- Seek to employ qualified teachers as instructors, but where this is not possible, ensure that instructors and facilitators are on long term training programmes with pathways to qualifications.
- Provide unqualified instructors with pedagogical support and supervision.
- Provide teachers with additional teaching skills and content knowledge relevant to the crisis context, such as psychosocial skills, disaster risk reduction and personal safety.