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**STAFF OF 2030:
FUTURE-READY TEACHING**

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About the research

Staff of 2030: Future-ready teaching is an Economist Intelligence Unit report, sponsored by Microsoft. It explores how teaching is set to change by 2030, drawing on a survey of early-career and student teachers in primary and secondary schools, an expert interview panel and an academic literature review. Covering curriculum reform, teaching practices, technology and the workplace environment, the survey reached 1,034 early-career (500) and student (534) teachers across ten countries.¹ We would also like to thank the following experts for their insights:

- **Thomas Arnett**, senior education researcher, Christensen Institute
- **Diana Hincapié**, economist, education division, Inter-American Development Bank
- **Lucy Kellaway**, co-founder, Now Teach; former columnist, *Financial Times*
- **Sal Khan**, founder, Khan Academy
- **Dirk Van Damme**, senior counsellor, directorate for education and skills, OECD
- **Esther Wojcicki**, lifelong teacher, journalist and author
- **Yong Zhao**, distinguished professor, School of Education, University of Kansas

Michael Gold was the editor of the report. The author was Adam Green.



¹ Australia, Brazil, Canada, Finland, Germany, Poland, South Korea, the United Arab Emirates, the United Kingdom and the United States.

Executive summary

Educators around the world are trying to modernise schooling to better prepare young people for the 21st century. Personalised and self-directed learning, social and emotional skills, and “issues-based” learning that explores linkages between subjects are just a few of the ways that progressive educators are working to equip young people for contemporary realities. At the same time, the teaching workforce is transforming as a new generation enters the profession and today’s working cohort ascends into management or begins to shape education policy. So-called Generation Z—defined as those born after 1997²—became the largest generation in 2019.³ What ideas and perspectives will these people bring? What are their professional expectations, goals and concerns? Are there enough new teachers coming through to deliver a reform agenda and reduce the churn, burnout and attrition of the education sector?

The Economist Intelligence Unit, sponsored by Microsoft, surveyed 1,034 early-career and student teachers across ten countries to gauge their attitudes towards—and predictions for—the future of their profession. The survey addressed many aspects of education: teaching practices; the role of technology; working conditions and resources; and demographic trends. Their views, combined with an expert interview panel and a comprehensive literature analysis, provide key insights into the factors shaping the workforce of tomorrow.

² Michael Dimock, “[Defining generations: Where Millennials end and Generation Z begins](#)”, Pew Research Center, January 17th 2019.

³ Anne Gherini, “[Gen-Z Is About to Outnumber Millennials. Here’s How That Will Affect the Business World](#)”, *Inc.*, August 22nd 2018.

The next generation of teachers back the reforms needed to deliver 21st-century education.

From redesigning curricula to utilising novel teaching practices, from augmentative technology to more dynamic learning spaces, survey respondents largely support progressive reforms.

- Nearly all survey respondents agree, by wide margins, that the purpose of education must shift to helping students know how to collect, interpret and apply information, rather than just learning it.
- A majority (60%) think new teachers will increase the use of technology by 2030. Half predict they will focus more on teaching social values and diversity, and nearly half (48%) expect an increased focus on social and emotional learning.
- Early-career teachers would, given the chance, rethink even the physical foundations of schooling: asked how they would allocate a US\$100,000 grant to their school, the number-one priority was “better physical learning spaces”.

Yet teachers are not being equipped with the skills and tools they need to deliver a next-generation education agenda—and optimism may be fading on the job.

The emerging workforce believes that teachers can shape student outcomes—eight in ten believe a good teacher can lift a student’s performance by at least one grade. However, many feel their training is not equipping them properly, and some trainee teachers’ optimism about the impact of progressive reforms dips once they enter the classroom.

- Only 26% of respondents think their training has equipped them for managing stress and burnout, a leading cause of teacher shortages. Of concern, student teachers are more confident than those currently in-service: 33% of the former group feel their training has prepared them for stress and burnout compared with 19% of working teachers.
- Only 38% feel their training is equipping them to use digital technology. This is a worrying minority given that digital competency is now entering curricula in a growing number of countries and technology is anticipated to play an increasingly important role in the classroom.
- Teachers feel unprepared to manage diverse classrooms: 91% expect classroom diversity to increase by 2030, but only 38% feel prepared to teach multicultural students.
- Optimism fades when trainees start working in a school. Compared with early-career teachers, student teachers:
 - consistently rank the importance of innovations in teaching and learning higher;
 - are more optimistic that technology will help them reduce time spent on administrative tasks;
 - think their profession is more well-respected by society; and
 - are more confident that a teacher can lift a student’s academic performance by at least one grade.



Only

26%

of respondents think their training has equipped them to manage stress and burnout.



Only

38%

of respondents feel their training is preparing them to use digital technology.

Education experts, and evidence from real-world contexts, reveal workable tactics to support the workforce of 2030 and beyond.

Expert interviewees and empirical evidence point to many effective ways to equip teachers for the realities of the job and motivate, energise and support them throughout their career.

- Teacher training should embody the dynamic learning environments reformers want to see in schools, expanding from stagnant didacticism to include greater personalisation, more interactive learning, and teacher-student interactions focused on tailored support.
- More relevant competencies must be taught. A blended approach combining academic content with vocational and technical skills, teaching strategies for diverse classrooms and ways to manage burnout is needed.
- High-performing countries uphold teaching as a socially-respected profession, and even countries suffering declines in teacher prestige have achieved turnarounds through smart reforms. Meritocratic career progression, better salaries, more effective teacher evaluation and career-long support of the workforce have been important in both education leaders like Singapore and Finland and emerging economies like Chile and Ecuador.
- The workforce could be enriched by tapping into under-utilised groups like mid- to late-career professionals, and teachers should be empowered with the space and freedom to develop their own solutions to lifelong education, including peer learning.



Introduction: Teaching for the 21st century

Standing at the dawn of the second decade of the 21st century, the mood among educators is restless. Complex global challenges, of which the climate crisis looms largest, call for a new generation that can act more holistically than their elders have. The modern economy has also changed beyond recognition. As automation encroaches on a growing number of jobs, a greater emphasis on unique human attributes like emotional intelligence and interpersonal understanding has emerged, neither of which were included in mainstream curricula of old. A post-industrial landscape, where intangible forms of capital like algorithms, data and software are creating wealth,⁴ requires new competencies in young people.

To that end, educators believe that more adaptive, personalised learning can hone the specific strengths and ameliorate the weaknesses of each student. Sal Khan, founder of education non-profit Khan Academy, believes we are moving from an era of “mass education, when students flexed to the pace of the curriculum, to an era where the curriculum can move to the pace of the student”.

As countries redesign education for the challenges and opportunities of the 21st century, the role of teachers will inevitably change. A modernisation agenda should itself have as a key tenet reforms that train and support teachers better than we do currently. According to UNESCO, 33 countries will not have enough teachers to provide quality education for all by 2030.⁵ This glum statistic calls for a new approach, one that marries the aspirations of teachers with the voices of experts, policymakers, students and society as a whole in charting a way forward. This paper explores possible futures for the teaching profession across diverse contexts and reveals the hopes, fears and expectations of a professional class more vital to our societies than ever before.



We are moving from an era of mass education, when students flexed to the pace of the curriculum, to an era where the curriculum can move to the pace of the student.

*Sal Khan,
Khan Academy*

⁴ J Haskel and S Westlake, “[Capitalism Without Capital: The Rise of the Intangible Economy](#)”, Princeton University Press, 2017.

⁵ “[Global Teacher Shortage Threatens Education 2030](#)”, UNESCO, October 2015.

Chapter 1: A new era of teaching and learning

Education is in need of an upgrade, and countries hoping to lead the global economy of tomorrow must start with a future-proof education sector. Creativity is one motivator of these reforms. The world's most successful people and firms are those solving problems in new ways rather than those with the most capital or access to physical resources. Ideas are the lifeblood of economic success in the modern knowledge economy and schools need to nurture more creative thinking in their students.

This ethos is starting to take root in China where an increasing educational emphasis on creativity and innovation includes supporting so-called “soft” factors like attitudes, approaches and the intellectual environment.⁶

“There are other countries where the percentage of Nobel prize winners is much higher [than in China],” says Esther Wojcicki, founder of the Palo Alto High School Media Arts Programme and an influential voice in education policy. “The question is, what are they doing that’s different? The answer is creativity.”

Mr Khan acknowledges the hand-wringing and introspection common among US educators about the country’s middling performance in education rankings, but declares himself an “American exceptionalist” when it comes to its innovation culture.

“Instead of the US saying, ‘How do we make our education system more like Finland or Singapore?’, I think it should be, ‘How do we

make the education system more reflective of the values and culture that have made the US the capital of innovation in the world?’” he says. “And that means things like a culture of risk-taking, of de-stigmatising failure, openness, being non-hierarchical and collaborative.”

The centrality of teaching

Teachers are critical to this effort. How they lead and what resources they use will need to evolve by 2030 if progress is to be made. To this end, a number of innovations are bubbling up through the profession. Ms Wojcicki directly links creativity in students to autonomous learning. She advocates “20% time” to introduce self-directed learning into the schedule. This should be “innovation or ‘moon-shot’ time where students are given freedom to come up with their own idea of what they want to do, what they want to study, and how they want to do it”. This can excite and empower teachers and reinvigorate their interest in the rest of their instruction, Ms Wojcicki argues.

Other examples include: phenomenon-based learning, in which students are taught about a topic in a cross-curricular manner; multidisciplinary learning modules which explore interactions between subjects by helping students explore themes, such as climate change, that are not collapsible into one academic topic;⁷ and reforms meant to better nurture higher-order thinking, real-world knowledge application, collaboration and problem-solving.⁸



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*Esther Wojcicki,
Palo Alto High School*

⁶ R Lee and Y Yuan, “[Innovation Education in China: Preparing Attitudes, Approaches, and Intellectual Environments for Life in the Automation Economy](#)”, in: Gleason N (eds), *Higher Education in the Era of the Fourth Industrial Revolution*, Palgrave Macmillan, Singapore, June 22nd 2018.

⁷ V Symeonidis and J Schwarz, “[Phenomenon-Based Teaching and Learning through the Pedagogical Lenses of Phenomenology: The Recent Curriculum Reform in Finland](#)”, *Forum Oświatowe*, 28(2), 31–47, December 2016.

⁸ C Tan and C Ng, “[Assessment Reform in Shanghai: Issues and Challenges](#)”, *International Journal of Educational Reform*, 27(3), 291–309, July 1st 2018.

Curricula are also now evolving to equip students for the fast-paced challenges and opportunities of online life. For example, online citizenship—such as teaching students critical-thinking skills so they can detect “fake news” and misinformation—is entering schooling. Online ethics around cyber-bullying, trolling and hate speech are also becoming part of the teaching agenda, while efforts to help young people learn about privacy and data security are increasingly warranted as they spend more time online.

To infinity and beyond

Technology will power many of these innovations. Thomas Arnett, senior education researcher at the Christensen Institute, a think tank, maps two impacts of technology on teaching specifically. The first is to replace repetitive or procedural work so teachers can focus on more meaningful engagements. For instance, automated exercise-book marking that takes care of basics like spelling and grammar would allow teachers to double down on evaluating elements like critical thinking. This kind of higher-order task relates to the upper tiers of an influential taxonomy of learning developed by 20th-century educator Benjamin Bloom—“create”, “evaluate” and “analyse”.⁹ Survey respondents also predict that technology itself could cultivate these kinds of intellectual skills in students.



Figure 1: New Bloom

Top two capabilities technology can cultivate in students, based on survey responses



Applying information to their own life or a new context



Inferring relationships or patterns from data

Source: The Economist Intelligence Unit

⁹ Patricia Armstrong, “[Bloom’s Taxonomy](#)”, Vanderbilt University Center for Teaching.

The second impact of technology, says Mr Arnett, is augmenting and expanding teaching practices. According to our survey, more engaging learning experiences is the top benefit of technology in the classroom. Mr Arnett says that tools like smart whiteboards can enhance a teacher’s role within a conventional lesson-delivery context, while other technologies can actively expand their capacity. Minutephysics, an educational YouTube channel, uses animation to teach students about everything from whether light photons cast shadows to why the solar system is flat.¹⁰

The humanities can also benefit from the addition of virtual experiences, such as exploring cultural sites. “There’s no way you can bring all the exhibits of the British Museum into your class, but now [through technology] you can,” says Yong Zhao, education professor at the University of Kansas.

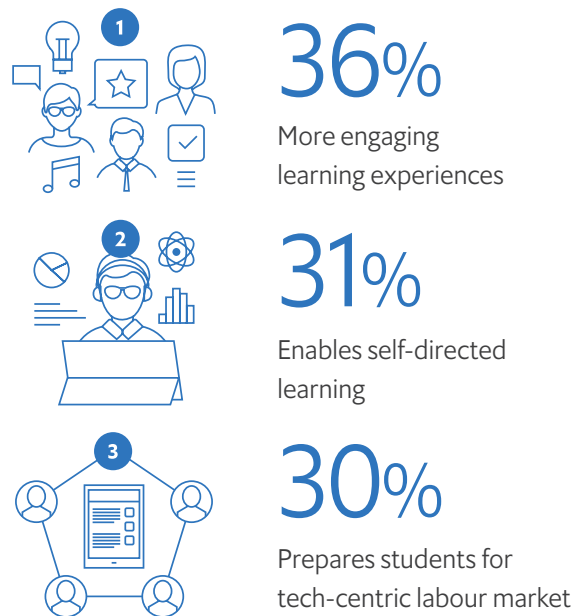
Mr Khan thinks technology could give educators richer insight by capturing student capabilities that conventional assessment metrics would miss. This could transform how teachers judge, evaluate and report. “The academic transcript of the future isn’t just your grades in classes but also a portfolio of things you’ve created,” he notes. “For instance, there could be a [digital] platform [that students use to work] on challenges and get peer evaluated. Students might spike in humour or communication, things that don’t show up on a transcript but are incredibly important.” Research has also demonstrated that technology has a role to play in bridging formal and so-called informal learning, which occurs outside of classrooms, and that the teachers need to be supported in fostering this.¹¹

Technology can also expand teaching in a more fundamental way by reaching students in marginal geographies, says Diana Hincapié,

education economist at the Inter-American Development Bank. In Brazil’s rural Amazonian community, television sets linked to satellites now give students real-time access to teachers thousands of kilometres away who are delivering study plans and lessons in engaging formats including video and animation.¹²

Over 300,000 young Brazilians have been part of the initiative, which reduced the school dropout rate by nearly half between 2008 and 2011.¹³ Such challenges are not unique to the Amazon, even if they are more extreme. Many remote areas cannot hire and retain enough teachers; 39% of rural schools in the US, for example, struggle to fill positions in every subject.¹⁴

Figure 2: Powering up
Top three perceived benefits of technology in the classroom
(% of survey respondents)



Source: The Economist Intelligence Unit

¹⁰ [Minute Physics website](#).

¹¹ C Lewin and A Charania, “Bridging Formal and Informal Learning Through Technology in the Twenty-First Century: Issues and Challenges”, in: J Voogt, G Knezek, R Christensen and K W Lai (eds), *Second Handbook of Information Technology in Primary and Secondary Education*, Springer International Handbooks of Education, 2018.

¹² “Teaching via TV in the Amazon”, Inter-American Development Bank.

¹³ Ibid.

¹⁴ Kelly Latterman and Sarah Steffes, “Tackling Teacher and Principal Shortages in Rural Areas”, National Conference of State Legislatures, LegisBrief, 25(40), October 2017.

Chapter 2: Change from within

Teaching in 2030 will not just be shaped by technologies, curriculum modifications and new practices. The workforce itself will be renewed as new generations bring their own ideas and experiences to the table. What impact will they have on the profession? What are their hopes, fears and predictions for life in the classroom and outside of it? Our survey of early-career and student teachers reveals the views, opinions and priorities of this cohort. It shows alignment with many reforms outlined in chapter one, but also reveals key areas in which the workforce does not feel adequately prepared for the classroom of tomorrow.

At the vanguard

Nearly all respondents agree by wide margins that the function of teaching must shift to helping students know how to construct, interpret and apply knowledge, rather than just learning it. They believe in the “teacher effect”—that teachers can produce material achievement gains in students, showing why attention to teaching practices matters.¹⁵ Eight in ten respondents believe a good teacher can lift a student’s performance by at least one grade.¹⁶

Far from being fearful of innovation, a majority (60%) think new teachers will increase the use of technology by 2030, with about half believing that technology should augment rather than replace teaching. “The technology age, with learning analytics, AI in the classroom and embedded systems, is not going to devalue the role of the teacher,” says Dirk Van Damme, senior counsellor in the directorate for education and skills at the OECD. “On the contrary, teachers should be very powerful in guiding the students, but in a different way than before, with a wider repertoire of skills and embedded in a technology-rich environment.”

A large share of respondents (48%) believe new teachers will focus more on social and emotional learning by 2030. This is driven partly by the growing evidence of how character traits and mindsets are as important to life success as conventional academic aptitude. It is also a response to an alarming increase in depression and anxiety among young people, evident in the US,¹⁷ Ireland,¹⁸ Germany¹⁹ and the UK,²⁰ to name a few.



The technology age, with learning analytics, AI in the classroom and embedded systems, is not going to devalue the role of the teacher.

*Dirk Van Damme,
OECD*

¹⁵ B Nye, S Konstantopoulos and L Hedges, “[How Large Are Teacher Effects?](#)”, *Educational Evaluation and Policy Analysis*, 26(3), 237–257, fall 2004.

¹⁶ The phrase “good teacher” was intentionally left undefined to allow respondents to formulate their own interpretation.

¹⁷ R Mojtabai, M Olfson and B Han, “[National Trends in the Prevalence and Treatment of Depression in Adolescents and Young Adults](#)”, *Pediatrics*, 138(6), December 2016.

¹⁸ David Kearns, “[Steep rise in young people reporting anxiety in Ireland, UCD report finds](#)”, University College Dublin, November 19th 2019.

¹⁹ “[More German students suffering from depression, anxiety, panic attacks](#)”, *Deutsche Welle*, February 23rd 2018.

²⁰ Haroon Siddique, “[Mental health disorders on rise among children](#)”, *The Guardian*, November 22nd 2018.

Mr Zhao believes teachers will expand their role to become “coaches, mentors, project managers, knowledge curators and community organisers. A teacher can [now] find ways to inspire and motivate students rather than merely presenting information from the front of a class. They can say ‘I understand you as a person, I know what you’re good at and your background, and I know about the world, so I can help you use your unique strengths to create value and have a successful life’”.

Building the future

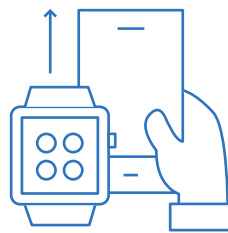
New teachers could also challenge the literal foundations of education: its bricks and mortar. Asked how they would allocate a US\$100,000 grant to their school, the number-one priority was “better physical learning spaces”. This correlates with, and is arguably necessitated by, the innovations of the 21st-century education agenda. The shift towards more interactive learning, collaboration, project work and autonomous time for students all bring into question a school’s physical architecture. Indeed, research suggests that physical space can have a substantial impact on pupil performance, with differences in the physical characteristics of classrooms explaining 16% of the variation in learning progress over a year, according to one study.²¹

“People are seeing the value of shifting from having school buildings, classrooms and bell schedules that dictate when you move and teachers delivering content, to one where students are advancing based on their individual mastery,” says Mr Arnett. “Instead of just identifying the content they need to cover, teachers identify students’ interests, their preferred ways of learning, and then design learning experiences that align to those needs.”



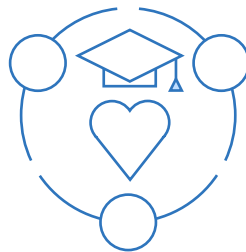
Figure 3: Voice of a generation

How will new teachers change the profession by 2030?
(% of survey respondents)



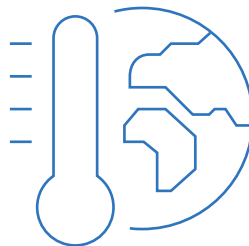
60%

Increase use of technology



48%

Increase focus on social and emotional learning



47%

Devote more teaching time to global issues like climate change

Source: The Economist Intelligence Unit



Asked how teachers would allocate a US\$100,000 grant to their school, the number-one priority was “better physical learning spaces.”

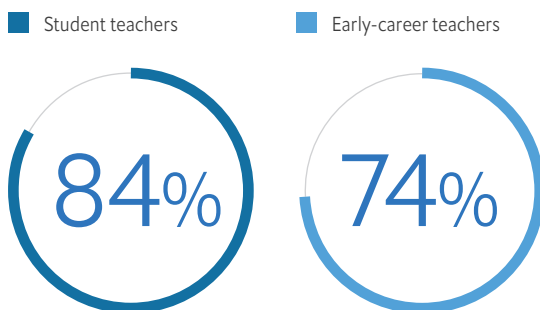
²¹ P S Barrett, Y Zhang, F Davies and L C Barrett, *Clever classrooms: Summary report of the HEAD project*, University of Salford, 2015.

Chapter 3: Bridging the gap to blaze a trail to 2030

While our survey shows that new teachers plan to bring fresh ideas to the classroom—and think their peers will too—they face substantial roadblocks. One is the realities of the work itself, which seem to be reducing teachers’ confidence in the impact of the innovations explored so far. Illustrating this, student teachers consistently rank the importance of innovations in teaching and learning higher than early-career teachers, by statistically significant margins (see figure 4). Student teachers are more optimistic that technology will help them reduce time spent on administrative tasks, and more student teachers think their profession is respected by society compared with early-career teachers—an area that also shows vast divides by country (see figure 6). Student teachers are also more confident that a teacher can lift a student’s academic performance by at least one grade.

Figure 5: Ready for lift-off

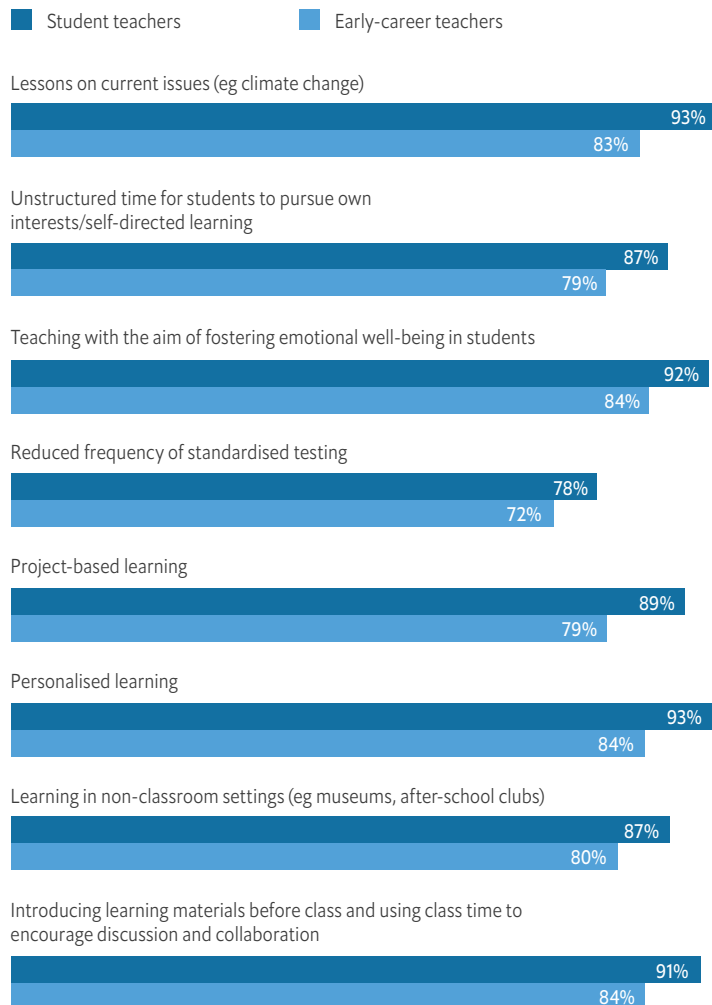
A good teacher can lift a student’s academic performance by at least one grade (% agreeing)



Source: The Economist Intelligence Unit

Figure 4: On-the-job learning

How important is/do you expect the following to be when it comes to your approach to teaching? (% of survey respondents)



Source: The Economist Intelligence Unit

One group in need of a shift in mindset, experts say, is parents. “The main thing that needs to change is the general population needs to understand that teaching in the 21st century is different,” says Ms Wojcicki. “And they have to support the teachers that are going to be making this change. Right now, teachers are very fearful of making change because they’re worried that all the parents are going to be upset. One of the problems that I ran into in making changes was parents saying, ‘I don’t want my kid to be part of your experiment.’”

There are deeper structural problems too. Start with burnout. Just 26% of respondents in our survey believe their training has prepared them for managing stress and burnout, a huge issue for a profession struggling to attract talent. Stress/burnout is also the top-joint factor expected to deter people from entering the profession by 2030. Student teachers are again more optimistic: 33% believe their training has prepared them for burnout, compared with 19% of early-career teachers, suggesting that the realities of the job are tougher than training is able to address.



Teachers are very fearful of making change because they’re worried that all the parents are going to be upset. One of the problems that I ran into in making changes was parents saying, “I don’t want my kid to be part of your experiment.”

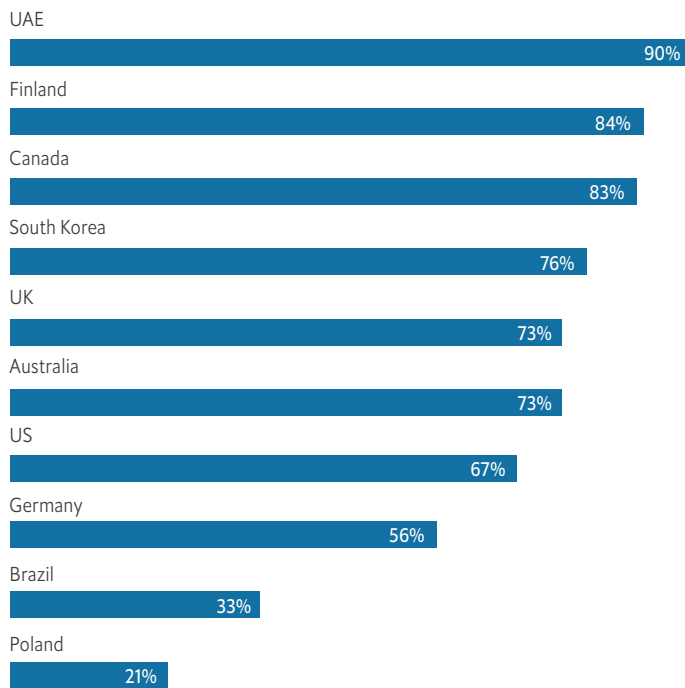
*Esther Wojcicki,
Palo Alto High School*



Figure 6: Pillars of society

How is teaching viewed as a profession in your country?

(% saying respected, by country)



Source: The Economist Intelligence Unit

Talent bottlenecks

Teacher shortages are an issue in many countries. These partly reflect socio-economic shifts that could be seen as positives, notably women's rising educational attainment and expanding labour market options. In Latin America, says Ms Hincapié, women of all talents and abilities once predominantly went into teaching but, as more professional opportunities have opened up, sizeable numbers have sought other livelihoods.

The tough realities of the job are clearly driving people away. Teachers in the UK, as elsewhere, suffer high workloads, lack of work-life balance, a perceived lack of resources and, in some cases, a perceived lack of support from managers, especially in managing pupils' behaviour.²² Tellingly, teachers' working conditions have been electoral campaign issues in various countries in recent years.^{23,24}

Getting more talent into the profession—and ensuring people stay—requires interventions at several levels: recruitment, training, retention and lifelong learning. Recruitment tactics need to evolve to find new ways of widening the candidate pool; something that new initiatives are aiming to address (see box).



In Latin America, women of all talents and abilities once predominantly went into teaching but, as more professional opportunities have opened up, sizeable numbers have sought other livelihoods.

*Diana Hincapié,
Inter-American Development Bank*

Tapping mid- to late-career talent: Learning from Now Teach

Lucy Kellaway, a successful columnist for the *Financial Times*, decided in her 50s to make a radical career change and become a teacher. Her experience of trying to enter the profession was painful, despite the shortage of teachers in England. "When I applied, the normal route was so complicated, and the paperwork [such as university transcripts] was geared towards 22-year-olds." She felt there would be many more like her "who have had a career in one area, that might be glamorous or lucrative, but [who fear] they have not made a tangible difference in the way that teaching does."

Ms Kellaway set up Now Teach, supported by the UK Department for Education, to support candidates like her. Now Teach offers training, mentoring, a peer network and logistical support, focusing on state-funded secondary schools serving disadvantaged communities. They have helped over 200 career professionals find jobs at 70 schools, prioritising the shortage areas of science, maths, IT and foreign languages. Their cohort, who hail from industries including media, finance, the public sector and IT, are highly educated: 13% hold a PhD and 41% hold a master's degree. Now Teach helps candidates achieve qualifications (including through flexible and part-time working), identify the most fitting subjects and schools, and access bursaries where needed. It also provides on-the-job support and mentoring, and has commissioned research into the role that flexible working could play in alleviating England's teacher shortages.²⁵

Around 27,000 students will be taught by Now Teachers in the 2019-20 school year. Ms Kellaway believes experienced, life-savvy entrants bring fresh perspectives that can be invaluable for students. As they are often more financially secure and established than younger teachers, they can also be more daring in shaking up entrenched thinking at schools, she argues.

²² "Summary and recommendations: teacher well-being research report", Ofsted, July 22nd 2019.

²³ Dylan Scott, "Kamala Harris's plan to dramatically increase teacher salaries, explained", *Vox*, March 26th 2019.

²⁴ "Brazil's 2018 campaign kicks off: here are the candidates proposals", *The Brazilian Report*, August 16th 2018.

²⁵ "Building Flexibility into Secondary Schools: Summary", Now Teach, July 4th 2019.

Teacher training, both pre-service and throughout a career, needs to evolve too. Experts say current approaches do not embody the dynamic learning environments progressives want to see in the classroom of tomorrow. “Traditional teacher-training schools often operate in a didactic manner; a bunch of students sitting in a lecture hall,” says Mr Khan. “If you have not experienced a classroom where everyone is learning at their own pace, where there’s lots of interaction with peer-to-peer learning, where the teacher is able to move around and unblock people and be a conductor of an orchestra, then it’s harder to do that yourself.”



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Sal Khan,
Khan Academy

The training imperative

Teachers also need better preparation to face changing social realities reflected in their classroom. The vast majority of survey respondents (91%) expect classroom diversity—including cultural, ethnic and linguistic—to increase by 2030, and half think the next generation will focus more on teaching social values such as diversity. This is, in reality, easier said than done since multicultural classrooms can be sources of conflict and stress if teachers aren’t equipped with the right tools.

One study in the Netherlands, where 2.7m of the country’s 4m first- or second-generation immigrants come from non-Western countries, found the highest rates of teacher burnout at junior vocational high schools, which also had the highest numbers of culturally and ethnically diverse classrooms.²⁶ Between 2013 and 2018, the OECD’s Teaching and Learning International Survey (TALIS), which covers a quarter of a million teachers across 48 countries, reported an increase in the share of teachers expressing “high need” for training in multicultural and multilingual teaching; only 35% of teachers reported that such training was part of their formal education.²⁷ “Teachers are insufficiently prepared to deal with extremely diverse classrooms,” says Mr Van Damme.

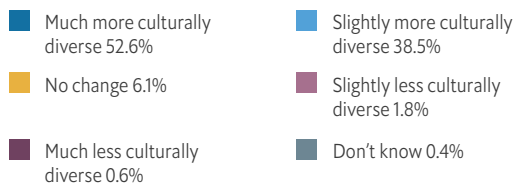
²⁶ A Dubbeld, N de Hoog, P den Brok and M de Laat, “[Teachers’ multicultural attitudes and perceptions of school policy and school climate in relation to burnout](#)”, *Intercultural Education*, 30(6), 599–617, January 11th 2019.

²⁷ [TALIS 2018 Results \(Volume I\)](#), OECD, p16

Teachers are also not adequately trained to use digital technology. While our survey respondents say that increasing the use of technology will be the main way young teachers will change the profession, only 38% feel teacher training is equipping them to use it. “Teacher trainers are one of the biggest problems,” says Mr Van Damme. “They are out of touch with what’s happening in the real world. They expect that pre-service teachers will manage to solve the technology problem by themselves because they are supposed to be digital natives.” He notes that TALIS respondents repeatedly cite technology training as a top professional development need given that effective use of technology faces many barriers inside the classroom, a finding also reflected in our survey (see figure 8).

Figure 7: Diversity matters

How do you predict the cultural diversity (multi-ethnic, multiracial and multilingual) of the students you teach/will teach will evolve by 2030?
(% of survey respondents)

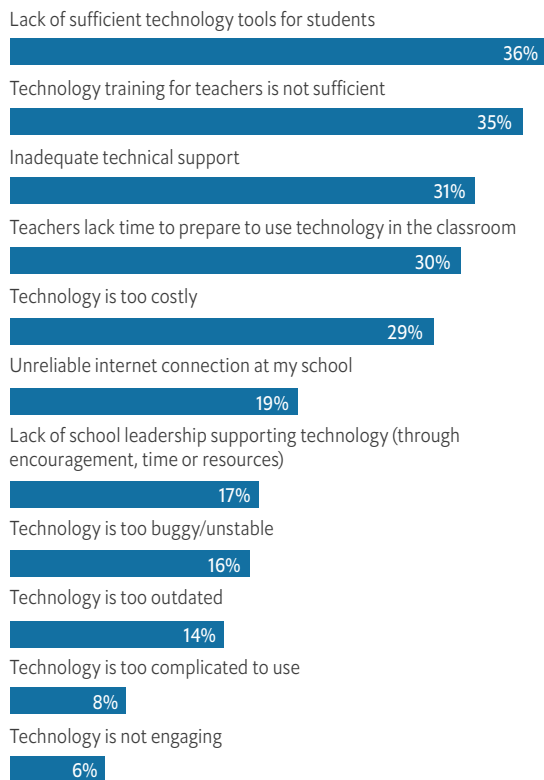


Source: The Economist Intelligence Unit

Figure 8: Powering down

What are the top barriers to achieving positive educational outcomes using technology in the classroom?

(% of survey respondents)



Source: The Economist Intelligence Unit

Improving teacher training does not simply mean cramming in more academic content, says Mr Van Damme. It may require a more vocational approach that prepares teachers for the realities of the job. He commends the approaches of Germany and Switzerland, both pioneers in apprenticeship-based learning, with Germany one of the few European countries posting an upward trend in its scores on the Programme for International Student Assessment, a major OECD student-testing initiative.

Supporting teachers for life

To recruitment and training should be added a third pillar: retention. Getting teachers to stay in the profession, stay motivated and continually improve is critical. Bolstering the prestige of the profession is a key part of this. In Singapore and Finland, entry to teaching is, famously, highly competitive, but lower-income countries have also launched successful reforms. Ecuador doubled teacher salaries in 2009 along with introducing a national hiring exam, teacher evaluations and incentives for high-performing teachers. Its student learning gains were among the highest of any Latin American country between 2006 and 2013.²⁸

Chile, Colombia and Peru have also worked to boost the prestige of the profession. A combination of meritocratic career progression, improved teacher evaluation systems and support for professional development has changed the teaching landscape in these countries, Ms Hincapié explains. Policymakers can also explore more perks to reward service: in England, a pilot is underway to grant year-long sabbaticals to teachers with ten years of service.²⁹

Lifelong learning can help teachers evolve their practice and develop mastery. Research shows that innovative teacher practices are reported more frequently by teachers with greater exposure to professional development schemes.³⁰ Yet lifelong learning is often poorly delivered. “You tend to be doing [professional training] at the end of a very long, hard day when the last thing you want is some teacher telling you how to do your job better when you’re barely keeping afloat as it is,” says Lucy Kellaway, founder of teacher placement organisation Now Teach. “That doesn’t make you feel that your lifelong mastery is being taken care of.”

²⁸ B Schneider, P Estarellas and B Bruns, “[The Politics of Transforming Education in Ecuador: Confrontation and Continuity, 2006–2017](#)”, *Comparative Education Review*, 63(2), 259–280, May 2019.

²⁹ Nicola Slawson and Richard Adams, “[Teachers to be offered year’s paid sabbatical to improve retention](#)”, *The Guardian*, May 3rd 2018.

³⁰ “[Innovative Teaching and Learning Research: 2011 Findings and Implications](#)”, ITL Research.

There can be more exciting, less structured ways of inspiring teachers to continually improve. One is letting them inspire and support each other through observation. By building a sense of camaraderie and *esprit de corps*, such approaches can also foster greater joint agency. Researchers have, over the past few decades, produced evidence that collective teacher efficacy—the shared belief among staff that they can positively affect students—and more contact with dedicated coaches are strongly and positively associated with greater student achievement.^{31,32,33}

In contrast, cautionary evidence shows the dangers of top-down education reform. A UK study argued that teachers' commitment to the profession is being eroded by bureaucratic changes at the management level, including the setting of performance targets, excessive managerialism and rigidly prescribed structures. Its authors argue that reform must be evaluated against negative impacts on the professional identity and wellbeing of teachers.³⁴ Lifelong learning or teacher assessment, both of which are essential to support teacher quality over the long-term, could easily go astray if imposed.



Teachers need to be able to observe other teachers who are really good at what they do. There's nothing more astonishing, and nothing that makes you feel more excited about what you do, than watching someone who is brilliant at it.

Lucy Kellaway,
Now Teach



³¹ R Anderson, M L Greene and P S Loewen, "Relationships among teachers' and students' thinking skills, sense of efficacy, and student achievement", *Alberta Journal of Educational Research*, 34(2), 148–165, 1988.

³² "Collective Teacher Efficacy (CTE) according to John Hattie", Visible Learning.

³³ J A Ross, "Teacher Efficacy and the Effects of Coaching on Student Achievement", *Canadian Journal of Education*, 17(1), 51–65, winter 1992.

³⁴ B Skinner, G Leavey and D Rothi, "Managerialism and teacher professional identity: impact on well-being among teachers in the UK", *Educational Review*, January 2019.

Conclusion: Flexible strategies for a complex problem

As important as the reforms outlined in this report may be, the spirit of change also matters. An adaptive approach, whether to curriculum or teacher training, technology roll-out or school design, allows for plenty of autonomy at the local level as opposed to big-bang changes from the top-down. A useful guiding light in this regard is the distinction drawn by Larry Cuban, professor emeritus of education at Stanford University, between complex and complicated problems.³⁵

A complex problem, like brain surgery or sending a rocket to space, requires “engineer-designed blueprints, step-by-step algorithms, well-trained staff and exquisite combinations of computer software running carefully calibrated equipment” under a top-down command structure. Complex problems, like criminal justice, healthcare and education are different, “filled with hundreds of moving parts, scores of players of varied expertise and independence, yet missing a mission control that runs all these different parts within an ever-changing political, economic and societal environment”.

Mr Arnett believes Cuban’s distinction to be instructive for today’s education reformers. “Complex problems are those for which you have no way to design technical solutions, so they require a lot of adaptability and human intuition. A complicated problem is figuring out how to design a microprocessor, while a complex problem is trying to understand a child. Because education falls in that second category, it’s important to give teachers flexibility to figure out how to make practices work well for them and for their students.”



A complicated problem is figuring out how to design a microprocessor, while a complex problem is trying to understand a child. Because education falls in that second category, it’s important to give teachers flexibility to figure out how to make practices work well for them and for their students.

*Thomas Arnett,
Christensen Institute*

³⁵ Valerie Strauss, “[The difference between complex and complicated and why it matters in school reform](#)”, *Washington Post*, August 8th 2014.

Educators around the world are trying to tackle the “complex problem” of how to modernise schooling and better prepare young people for the opportunities and challenges of the 21st century. Teachers are an essential element of this: the views, perspectives and ideals of those entering the profession must be part and parcel of any reform effort for it to be successful.

Survey trends, and experts interviewed for this report, show that the new generation of educators is largely aligned with the need for innovation in teaching and learning. At the same time, they seek greater support in key areas like dealing with burnout and stress, using digital technology for teaching and enabling diverse learners. For some, their optimism about the impact of innovation, technology and teacher excellence on student outcomes—and societal views on the prestige of their profession—fade over time, though this is far from inevitable.

Addressing these issues will be crucial as teaching—perhaps more so than many other professions—is at a turning point. Societies depend on teachers to cultivate the next generation of leaders, thinkers, doers and inventors. Yet the existence of teachers who can do this is not a *fait accompli*. Teachers—especially younger ones—need to participate in the reforms touching their profession, and touching education more broadly—and need the support to help them do so.



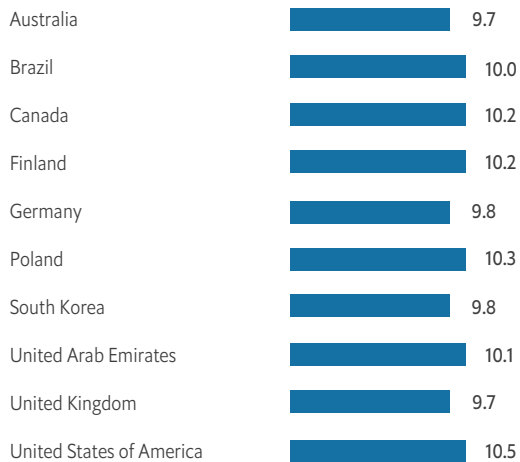
The views, perspectives and ideals of those entering the teaching profession must be part and parcel of any reform effort for it to be successful.

Appendix: Survey results

All figures represent % of respondents

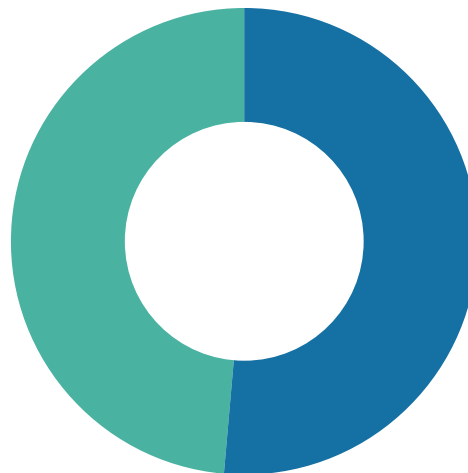


D1. Respondent country



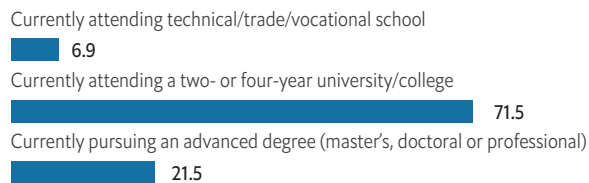
D2. What is your current status?

Full-time teacher 48.4 Student teacher 51.6



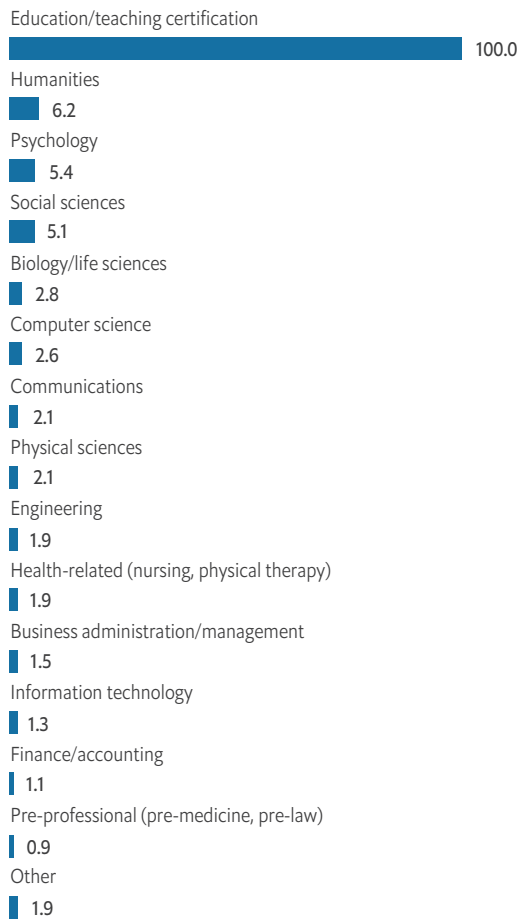
D3. Which of the following best describes your current education level?

For student respondents only



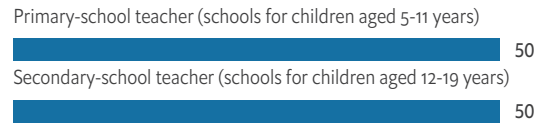
D4. Which of the following subjects best describe(s) your main area(s) of study?

For student respondents only



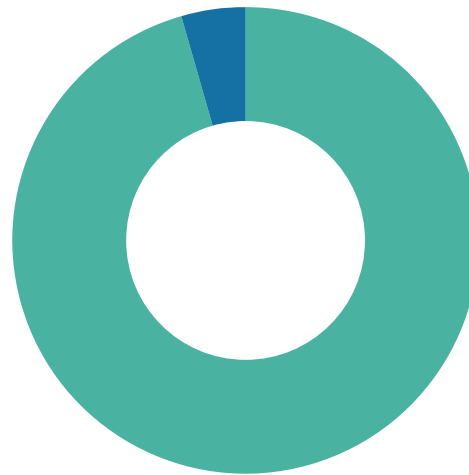
D5. Which of the following best describes your current role?

For full-time teachers only

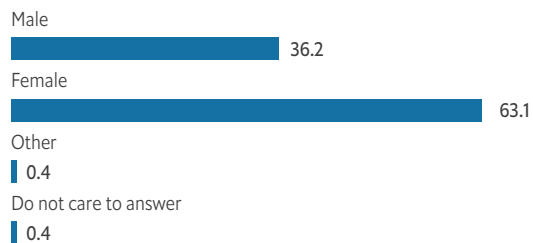


D6. For how long have you been a teacher?

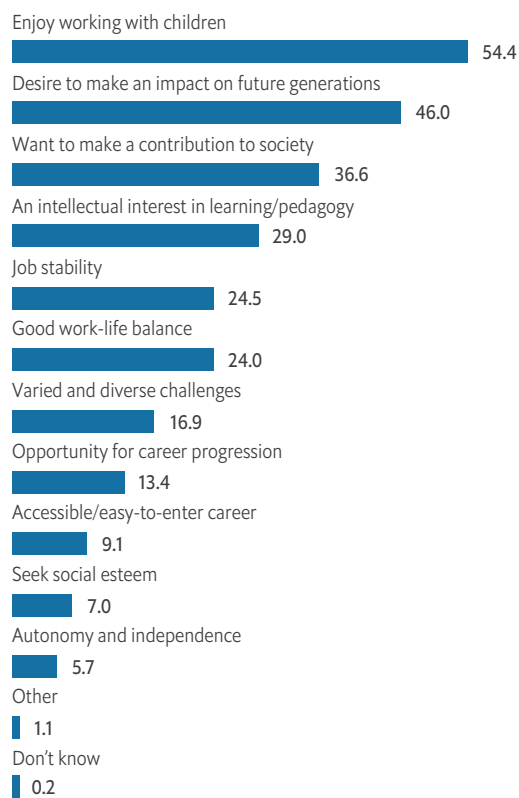
For full-time teachers only



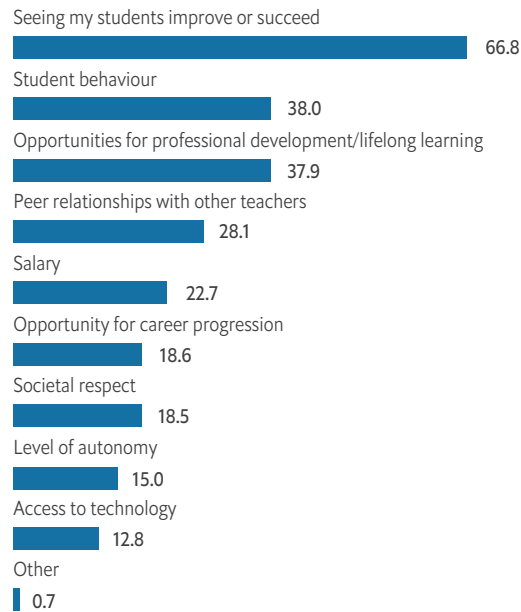
D7. Which best describes your gender?



Q1. Which of the following best explains why you [went into teaching/are going into teaching]?

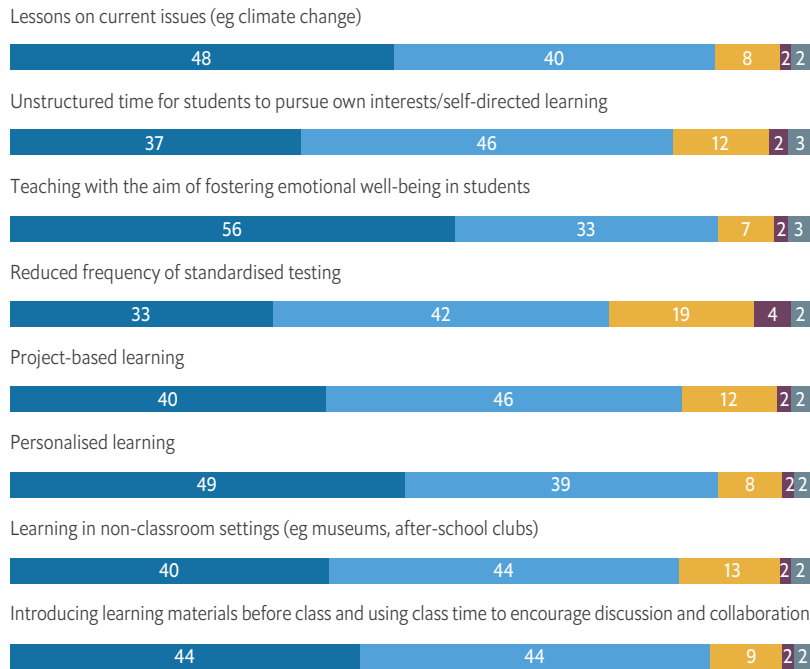


Q2. Which of the following factors [do you expect will] most impact your work satisfaction as a teacher?



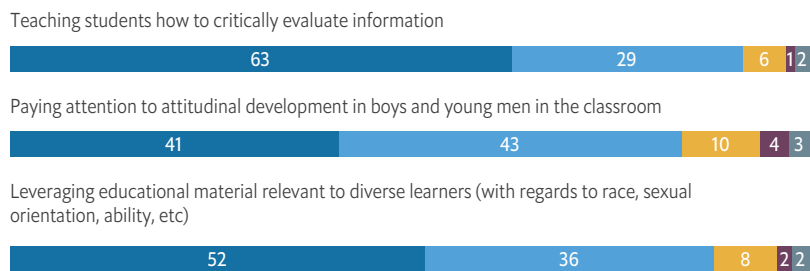
Q3. How important [are/do you expect] the following [will be] when it comes to your approach to teaching?

Very important Somewhat important Not very important
 Not at all important Don't know



Q4. To what extent can the following education-related measures help address wider social issues in your country?

A great deal Somewhat Very little
 Not at all Don't know





Q5. To what extent do you agree or disagree with the following statements?

- Agree strongly
- Agree somewhat
- Neither agree nor disagree
- Disagree somewhat
- Disagree strongly
- Don't know

Teachers should be regularly assessed to ensure they are effective



A good teacher can lift a student's academic performance by at least one grade



The purpose of education must shift to helping students know how to collect, interpret and apply information, rather than just learning it



Q6. For which of the following challenges [did your teacher training prepare you/is your teacher training or education preparing you]?

Encouraging development of skills such as critical thinking, creativity, problem solving, etc



Developing my own teaching practices



Teaching beyond the textbook



Nurturing students' social and emotional wellbeing



Helping students see the intrinsic value of learning



Using digital technology for instruction



Teaching in a multicultural classroom



Working with parents



Managing stress and burnout on the job



Other



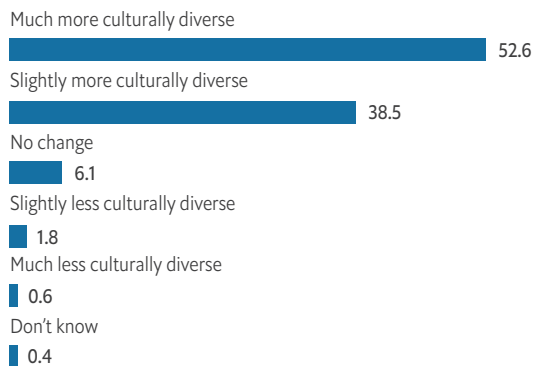
None of the above



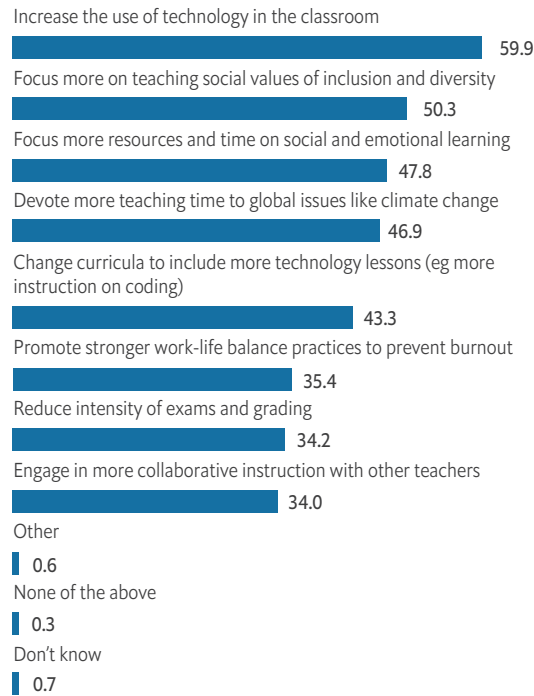
Don't know



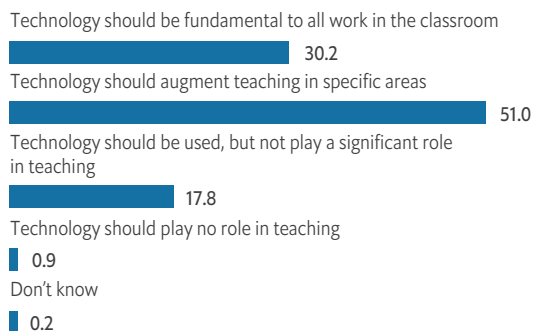
Q7. How do you predict the cultural diversity (multi-ethnic, multiracial and multilingual) of the students you [teach/will teach] will evolve by 2030?



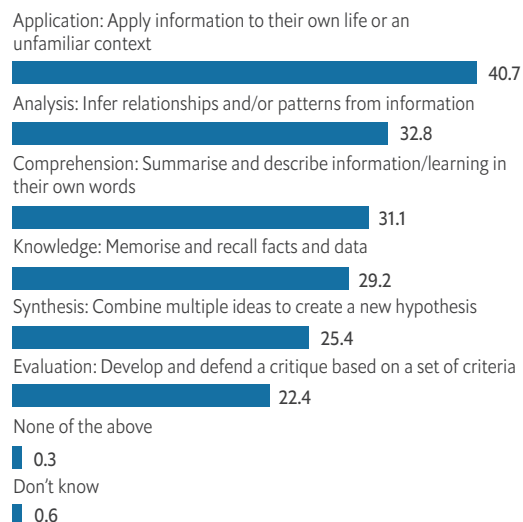
Q8. How will teachers currently entering the profession change the practice of teaching by 2030?

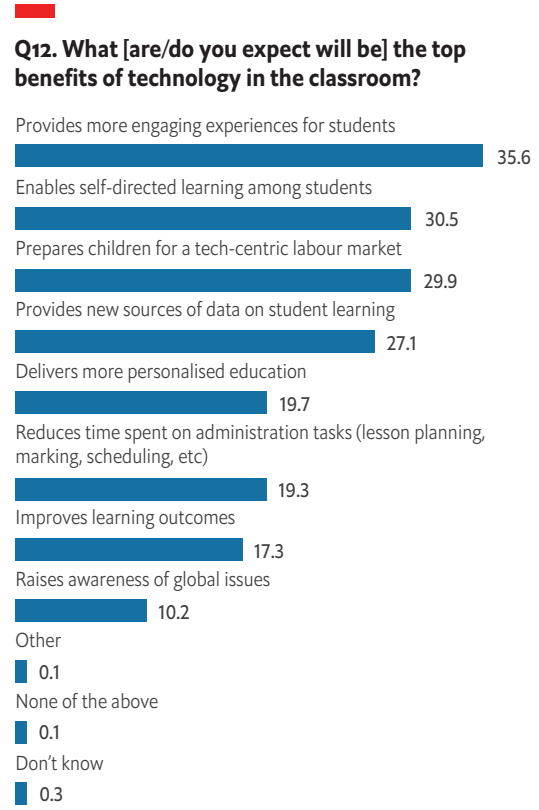
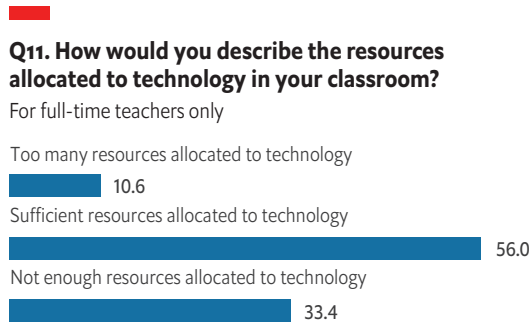


Q9. To what extent should technology play a role in the classroom?

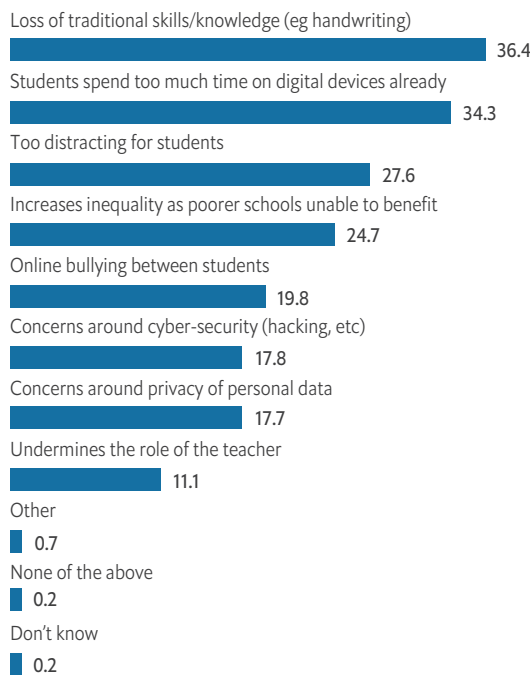


Q10. Which of the following learning categories is technology in the classroom best suited to cultivate in students?



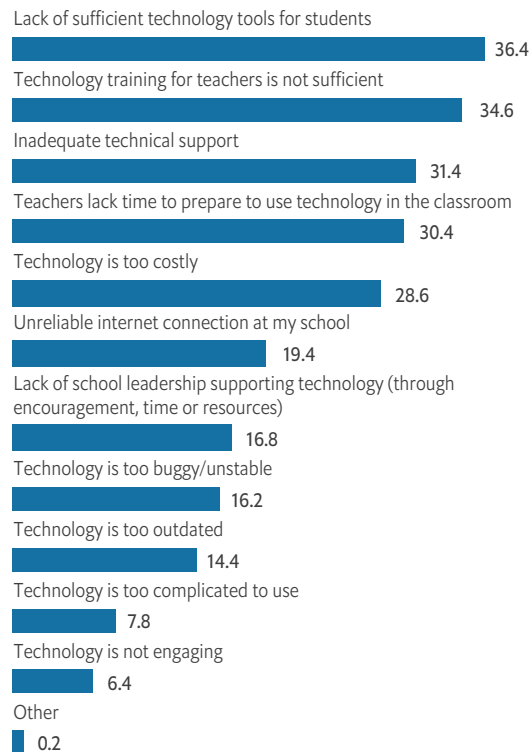


Q13. What [are/do you expect will be] the top challenges associated with technology in the classroom?

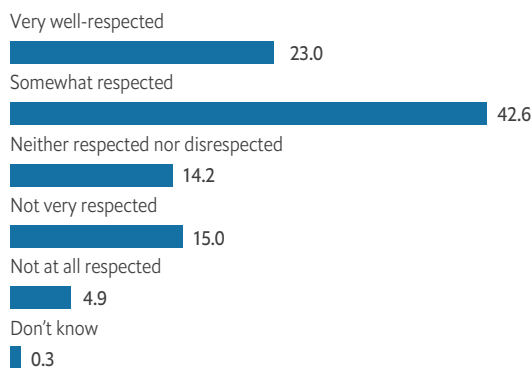


Q14. What are the top barriers to achieving positive educational outcomes using technology in the classroom?

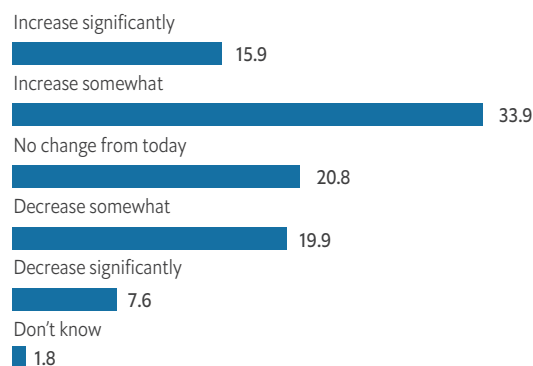
For full-time teachers only

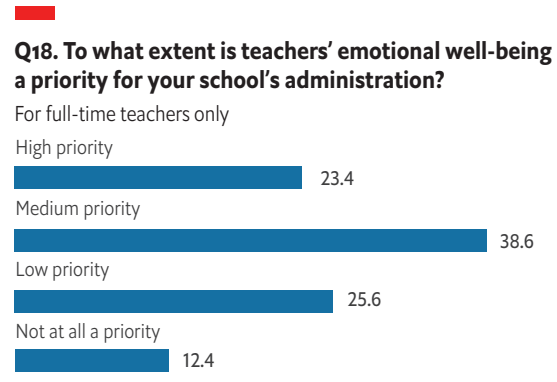
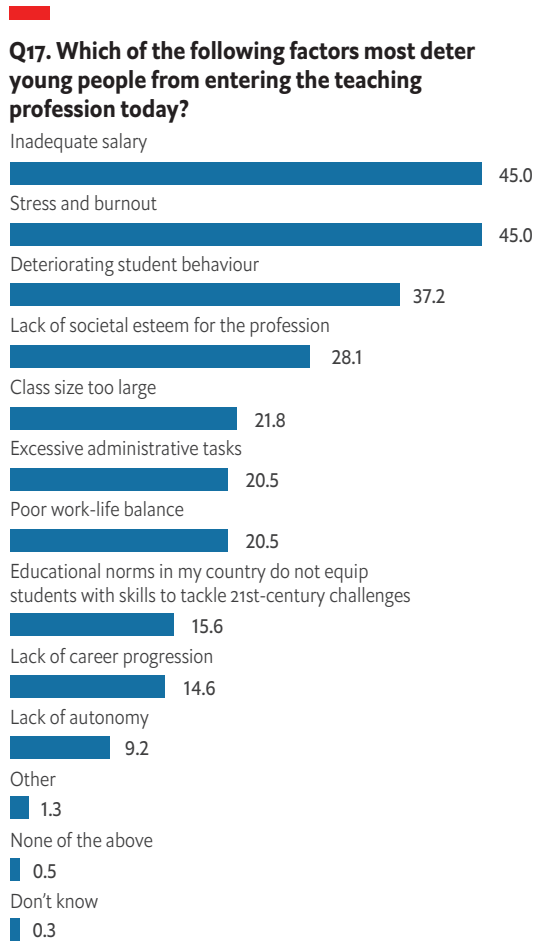


Q15. How is teaching viewed as a profession in your country?



Q16. To what extent do you think the number of students entering teaching in your country will change over the next ten years?







Q19. How often do you engage in the following activities as part of your professional [career/learning]?

- Regularly (at least once a month)
- Occasionally (a few times a year)
- Rarely
- Never
- Don't know/Not applicable

Participate in peer learning activities (mentorships, conferences, group sessions, informal sharing of best practices, etc)



Attend professional development classes (either online or in-person)
[For full-time teachers only]



Read new academic research about teaching practices and innovations



Subscribe to/participate in organisations outside of school context (eg membership of advocacy groups, teachers' unions, etc)

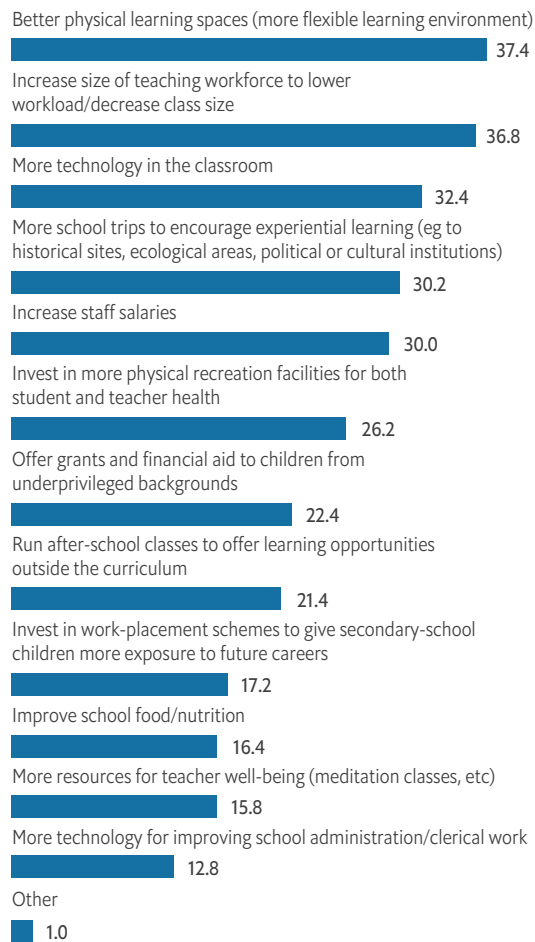


Contribute to social media groups involving teachers and education professionals



Q20. Imagine your school was allocated an additional US\$100,000 grant. Select the top three areas it should prioritise

For full-time teachers only



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