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Ensuring the tide lifts all  
boats: Improving quality and  
equity in schools across  
New Zealand

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## ABSTRACT/RÉSUMÉ

### Ensuring the tide lifts all boats: Improving quality and equity in schools across New Zealand

The education policy framework and New Zealand's autonomous school system have many strengths and centres of excellence. New Zealand has a deep pool of highly talented and motivated teaching professionals, but the system is performing below potential. Student achievement is declining and equity is not improving, and outcomes are too variable even in the same school. Many of the support elements are lacking, including a sufficiently detailed curriculum, efficient assessment tools, specialist subject teaching practice and curriculum implementation advice, and initial teacher education tailored to the unique demands the system imposes. The Ministry of Education's operational capacity was pared back too far. Many improvements can be made without increasing total spending. The Ministry should continue to develop its operational support capacities. The government should better spread best practices, and continue efforts to provide a detailed curriculum, an assessment system and education of teachers and training for boards and principals better informed by data, evaluations, education research and the expertise of the system's experienced actors.

This Working Paper relates to the 2024 Economic Survey of New Zealand <https://www.oecd.org/economy/new-zealand-economic-snapshot/>

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Keywords: education, primary, secondary, early childhood, New Zealand.

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### Veiller à ce que la marée soulève tous les bateaux : améliorer la qualité et l'équité dans toutes les écoles de Nouvelle-Zélande

La politique d'éducation et le système scolaire autonome de la Nouvelle-Zélande disposent de nombreux atouts et de centres d'excellence. La Nouvelle-Zélande dispose d'un vivier important de professionnels de l'enseignement hautement talentueux et motivés, mais le système fonctionne en deçà de son potentiel. Les résultats des élèves diminuent, l'équité ne s'améliore pas et les résultats sont trop variables, y compris au sein d'un même établissement. De nombreux éléments d'encadrement font défaut : des programmes d'enseignement suffisamment détaillés, des outils d'évaluation efficaces, une maîtrise fondamentale et pédagogique spécifique aux matières enseignées, des conseils sur la mise en œuvre des programmes scolaires, ainsi qu'une formation initiale des enseignants adaptée aux exigences que seul le système scolaire impose. La capacité opérationnelle du ministère de l'Éducation a été trop réduite. De nombreuses améliorations peuvent être apportées sans augmenter les dépenses. Le ministère devrait continuer à développer ses capacités de soutien. Le gouvernement devrait mieux diffuser les meilleures pratiques et poursuivre ses efforts pour fournir des programmes scolaires détaillés, un système d'évaluation et de formation des enseignants, conseils scolaires et des directeurs d'école mieux éclairés par les données, des évaluations, de la recherche pédagogique et de l'expertise des acteurs expérimentés du système scolaire.

Ce document de travail concerne l'Étude économique de la Nouvelle Zélande de 2024 <https://www.oecd.org/economy/nouvelle-zelande-economic-snapshot/>

Mots clés : enseignement primaire, enseignement secondaire, éducation de la petite enfance, Nouvelle-Zélande.

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# Ensuring the tide lifts all boats: Improving quality and equity in schools across New Zealand

By David Haugh, Axel Purwin and Paulo Santiago<sup>1</sup>

## Declining school education performance and ongoing inequity are a serious threat to New Zealand's prosperity

Schooling quality and equity are important determinants of individual earnings, the distribution of incomes, productivity and economic growth (Krueger and Lindahl, 2001; Hanushek and Woessmann, 2007, 2012). People with higher levels of educational achievement are more likely to find employment, stay employed and have higher earnings (OECD, 2023). From an economic performance perspective, education is an investment that generates a stock of human capital and is a key determinant of both individual earnings (Becker, 1994) and economic growth (Lukas, 1988; Barro, 2001) as it raises individual and economy-wide productivity. On average across the OECD, adults with upper secondary education earn 18% more than those with below upper secondary education. Better achievement at school raises the probability of entry into tertiary education. Individuals with tertiary education at the bachelor's degree level and post graduate levels on average across the OECD earn 74% and 229% respectively more than adults with below upper secondary education (OECD, 2023).

Poor education performance in school is rarely caught up later creating long-term negative effects. Indeed, recent OECD research finds that a fall of 8 points in the average country score in mathematics, science and reading in the OECD's PISA tests of student achievement is associated with a long-term decline in aggregate productivity of 1% (Egert et al., 2023); this suggests that the decline of almost 29 points in New

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<sup>1</sup> David Haugh and Axel Purwin are members of the OECD Economics Department and Paulo Santiago works for the OECD Directorate for Education and Skills. The authors acknowledge valuable comments and inputs received from Vincent Koen, Luis de Mello, Isabell Koske, Charles Denner, Hansjörg Blöchliger (OECD Economics Department), Peter Hoeller (former OECD Economics Department), Lucie Cerna, Hannah Kitchen, Marco Kools, Karine Tremblay, Miho Taguma and especially Rebecca Frankum and Stéphanie Jamet (OECD Directorate for Education and Skills), John Brooker, Mahina Melbourne, Stuart McNaughton and many other former and current members of the New Zealand Ministry of Education, Zane Mater and other members of the Education Review Office, Michael Johnston (The New Zealand Initiative), James Beard, Kerryn Fowle, Vicki Plater, James Bibby, Giles Bollinger, Ian Moore, Katie Keir and other members of the New Zealand Treasury, Nina Hood (University of Auckland), the School Trustees Association, the Secondary Principals Association of New Zealand, the New Zealand Institute of Education, the Post Primary Teachers Association, the Teachers Council of New Zealand, as well as many other academics, teachers and principals that generously provided their time and expert advice. Special thanks are due to Sisse Nielsen (OECD Economics Department) for editorial assistance.

Zealand's average PISA score between 2006 and 2018 will eventually reduce aggregate productivity by close to 4 percentage points. This is an important reason why turning around a trend decline in New Zealand school education performance, including in literacy and numeracy, and increasing equity in education outcomes, is key to ensuring the future performance of the economy and the wellbeing of all New Zealanders. The previous *OECD Economic Survey of New Zealand 2022* found that weaker learning outcomes at school in mathematics and science are already constraining the capacity of the economy to grow and create jobs through digitalisation. New Zealand's education system has many strengths and should remain devolved but implementation of the education policy framework needs a major overhaul.

This paper discusses primary and secondary education in three main sections. The first section analyses trends in achievement and equity in international comparison. The second section discusses how to reprioritise spending towards deepening an intermediate support layer to help schools, school boards, principals and teachers to put policy into action and strengthening horizontal ties between actors. The final section focuses on policies to offset socio-economic disadvantage and close ethnic, gender and regional equity gaps. Overall government spending rose significantly from 2017 to 2023. New Zealand faces a structural fiscal deficit and gradual consolidation is required (OECD, 2024). In this context, as discussed below, many improvements to education can be made without resorting to increasing spending. Where new spending is required, this should occur via re-prioritisation of spending.

## Achievement has fallen and inequality remains high

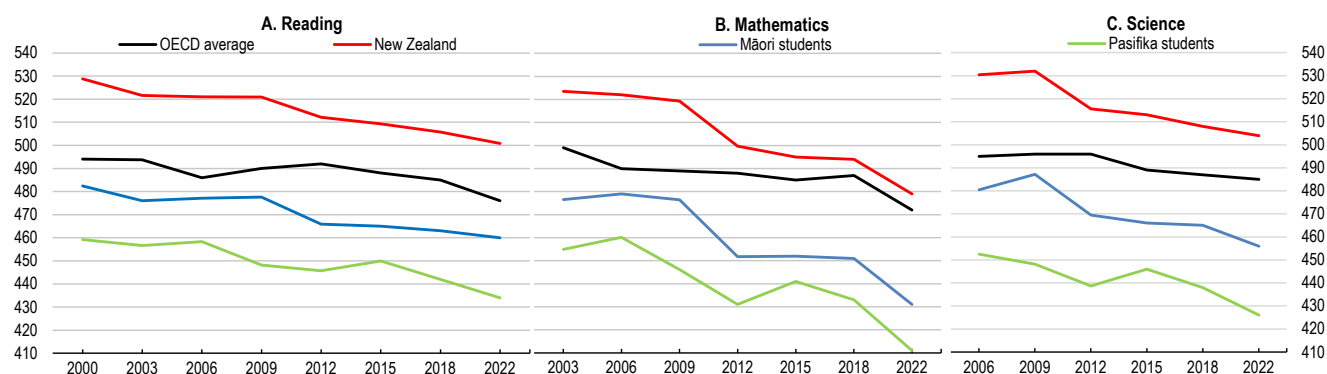
### **Results have fallen in primary and secondary education**

In the first PISA study, which surveys 15-year-olds, published in 2000, New Zealand ranked third among OECD countries in both mathematics and reading. Since then, New Zealand's school performance has weakened considerably, relative to both past performance and peer countries, although it continues to score above the OECD average. In the latest (2022) PISA assessment, it fell to 19<sup>th</sup> place in mathematics, recording the third biggest drop since 2006 of any country, and 7<sup>th</sup> in science and reading. Between the 2018 and 2022 PISA assessments, a period when learning was disrupted by COVID-19, the results of children in most countries fell. New Zealand's results in mathematics fell as much as the OECD average, while the New Zealand's decline in reading and science was slightly less. However, there is upward bias in New Zealand's ranking and results in the PISA 2022 study as high-achieving students were over-represented in the sample; analysis by the Ministry of Education (2023e) suggests this led to an estimated upward bias of around 10 points on the PISA scale.

The biggest decline in PISA scores occurred between 2009 and 2012 for all three subjects but a downward trend is evident through to 2022 (Figure 1). Mathematics especially saw a jump in the share of low performers (children scoring below level 2 or the baseline for mathematics proficiency). Since 2012, the share of low performers in mathematics has risen further, reaching 29% in 2022, whereas the share of the top performers (level 5 or above) has dropped gradually, to 10% by 2022. The same decline in achievement across the performance distribution, albeit less pronounced, can be observed for reading and science, and is similar across the socio-economic spectrum and for Māori and Pasifika students.

The negative trend in student achievement is corroborated by other international studies (Figure 2) as well as domestic assessments. Since 2006, reading comprehension among year five students has deteriorated, according to the PIRLS-study, and New Zealand placed 26<sup>th</sup> out of the 29 OECD countries that participated in 2016, scoring well below peers such as Australia, Canada and England. Similarly, in TIMSS, which tests capabilities in mathematics and science among fourth and eighth graders, New Zealand scores among the worst of the participating OECD countries.

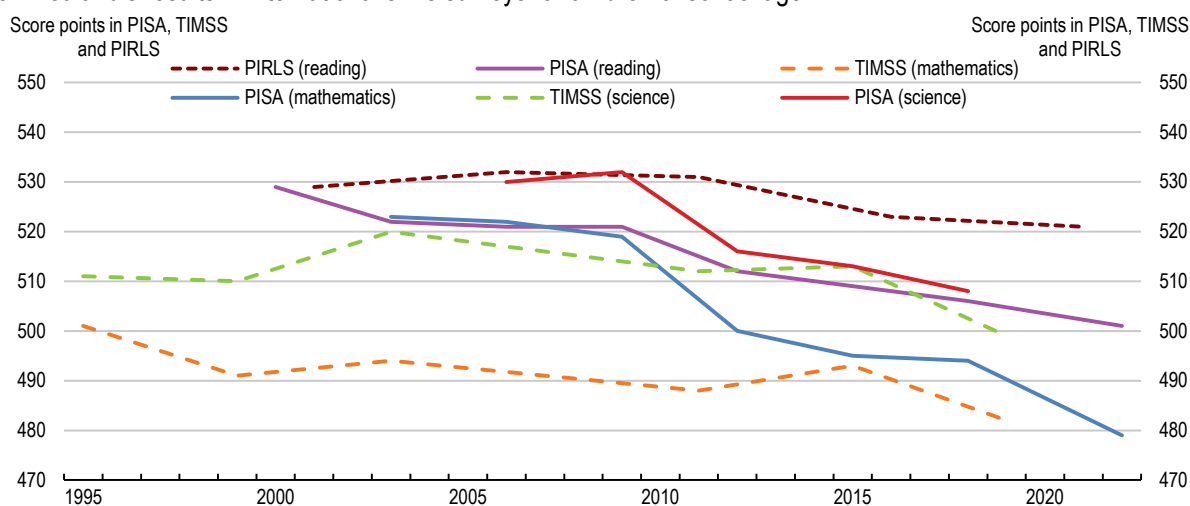
Figure 1. New Zealand's average PISA scores have declined



Source: OECD, PISA database.

Figure 2. Other international assessments also show declining achievement

New Zealand's results in international skills surveys for children of school age



Note: PIRLS denotes the national average results of fourth-graders in the Progress in International Reading Literacy Study. TIMSS denotes the national average results of eight-graders in the Trends in International Mathematics and Science Study. PISA denotes the national average results of 15-year-olds in the OECD Programme for International Student Assessment. For all three assessments, the overall mean set to 500 and a standard deviation of 100 points.

Source: Ministry of Education, Education Counts (2023).

The difference in New Zealand's noticeably better mathematics performance in PISA than TIMSS could potentially be attributed to the way the assessments are designed. Whereas TIMSS focuses on factual and procedural knowledge taught in mathematics curricula, PISA emphasizes understanding how to apply mathematics to everyday situations, a type of questions that is arguably closer to how mathematics is supposed to be taught in New Zealand.

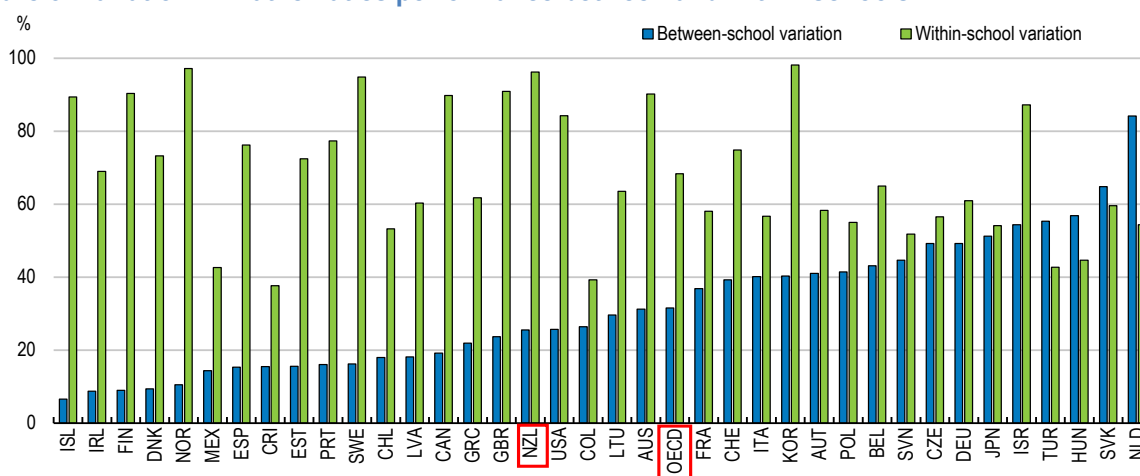
The National Monitoring Study of Student Achievement (NMSSA) suggests that performance problems appear to be occurring between year 4 and year 8 (i.e., in the primary and intermediate system). The 2022 NMSAA study finds that 82% of year 4 children meet the minimum mathematics curriculum requirements, whereas by year 8 only 42% do. These figures are practically unchanged since 2013 and the drop is reflected across genders, ethnicities and school deciles. A similar pattern emerges for English and science, with a 28-percentage point fall in writing to 35% and a 74-percentage point drop in science, to 20%.



### Equity in education outcomes is not improving

New Zealand has long allocated equity funding to schools based on the socio-economic status of the area in which the school operates through the equity grant, and then from 1995 the decile system and since 2023 the Equity Index. Nevertheless, gaps in student performance between different socio-economic and ethnic groups, as well as between girls and boys, remain wide. The comparatively large differences in student performance between socio-economic groups persist even though socio-economic segregation across schools is lower than in most other OECD countries. Consequently, low- and high-performing children are clustered in the same schools less often than the OECD-average. This along with a high variety of what is taught even within the same school contributes to high within-school and low between-school variation in achievement in comparison to the OECD (Figure 3).

**Figure 3. Variation in mathematics performance between and within schools**



Source: OECD, PISA 2022 database.

Differences in achievement by socio-economic background are also apparent in the NMSSA assessments and larger in mathematics and science than in English. For year 8 mathematics, high decile (i.e., deciles 8-10) children scored 21 points better than low decile (i.e., deciles 1-3) children, a difference corresponding to two and a half years of normal school progress. A pilot study of the new Literacy and Numeracy pre-requisite standards in the National Certificate of Educational Achievement (NCEA), discussed further below, also shows disparities. Achievement rates differed vastly between high and low deciles, with a mere 12% of secondary children in decile 1-schools meeting the standard in English writing, whereas 59% met the standards in decile 10 schools (Evaluation Associates, 2023).

There is also a large variation in performance by ethnicity. An important reason for this is the high correlation of ethnicity and socio-economic background. In addition, Māori children sometimes face additional barriers to learning, such as lower expectations from teachers or fewer teacher-student interactions (Henderson, 2013). Domestic and international studies both point to considerably worse outcomes for Māori children than non-Māori, with the gap being particularly pronounced in mathematics and science. In the NMSSA studies, the difference between Māori and New Zealand Europeans surpasses one year of school progress for all subjects (mathematics, science, reading, writing, speaking, presenting, listening and viewing) and grades (years 4 and 8) except for year 4 writing. In PISA, outcomes for Māori have declined largely in line with that of the non-Māori population over the past two decades.

Pasifika also tend to live in socio-economically disadvantaged neighbourhoods and almost half of the Pasifika students partaking in PISA attended deciles 1 to 3 schools. Both PISA and NMSSA studies indicate that outcomes are worse for Pasifika than Māori and other non-Pasifika. Differences are especially

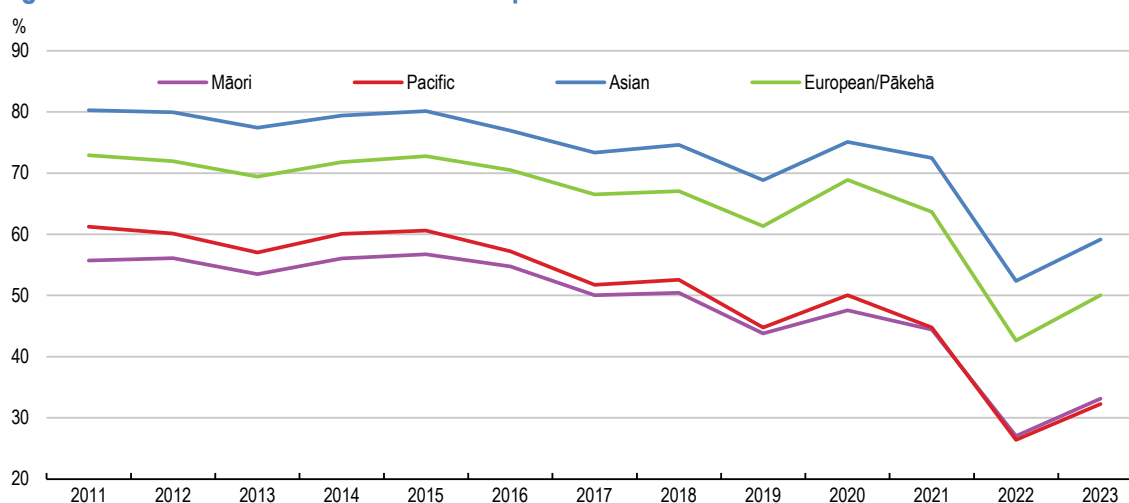
large in mathematics. By contrast, Pasifika children assess teacher support and school wellbeing as better or on par with those of non-Pasifika. Pasifika children are, however, less likely to report being assigned long texts in their English class, which could point to Pasifika not having equitable access to educational opportunities (May et al., 2019).

Gender gaps in student performance are manifest, albeit roughly on par with the OECD average. Girls significantly outperform boys in reading although the difference has narrowed since 2012, mainly owing to girls' declining performance. In mathematics, a higher share of top performers pushes boys' average scores above that of girls. In science, girls and boys are roughly equal, even if the distribution of outcomes is wider for boys. The share of girls attaining university entrance has been consistently over ten percentage points higher than boys' over the past decade.

### ***Raising attendance requires action on multiple fronts including reducing bullying***

School attendance in New Zealand is low by international standards and has fallen (Figure 4). In the last term of 2023 only 54% of students had attended school over 90% of the time, down from 66% just prior to COVID-19. OECD data, albeit dated, suggests that around 85% of children attend 90% of the time across the OECD (OECD, 2013a). Attendance has likely declined in New Zealand, for several reasons. These include the detachment from in-person attendance at school and work caused by COVID-19 but attendance was declining before COVID-19. A low sense of belonging to school in some groups, child and parent ambivalence about school attendance, and increased rates of bullying all appear to play a part. As discussed below greater cultural relevance of schooling can play an important role in improving a sense of belonging for Māori. Four out of ten parents are comfortable with their child missing a week or more of school and the children of these parents are twice as likely to miss school regularly (ERO, 2023). It is important that parents impress on their children the importance and value of attending school every day. Bullying also appears to be a key contributor to low attendance, with victims more likely to suffer from poor mental health and peer rejection, and perpetrators at greater risk of future unemployment and delinquency (Green et al. 2019). The effects of bullying also extend to those who witness it and to schools at large, which see falling student performance (OECD, 2019a).

**Figure 4 School attendance is still below pre-COVID levels**



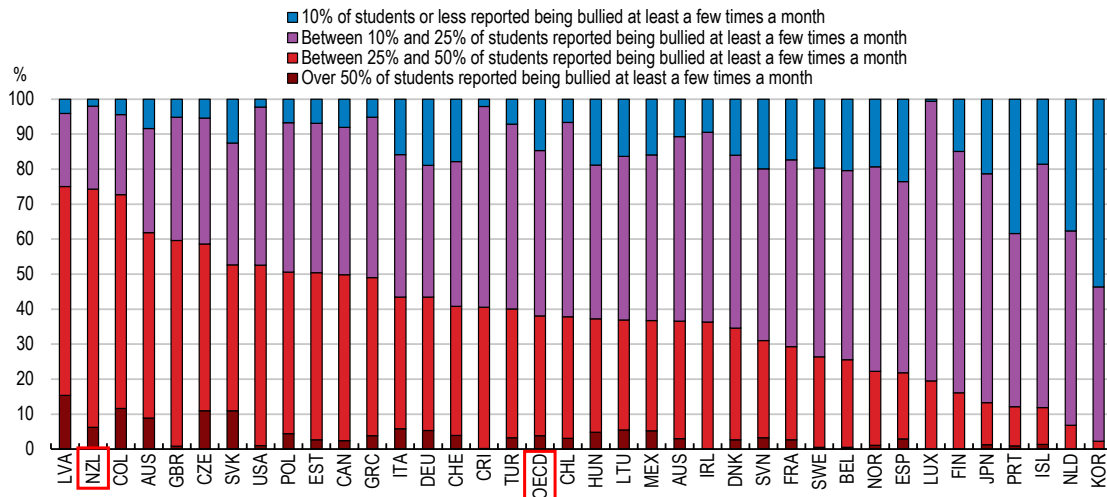
Source: Ministry of Education, Education Counts (2023).

In the 2018 PISA survey, New Zealand had the highest share (15%) of students who reported being frequently bullied of any OECD-country and ranked high in all different types of bullying (Figure 5). In the

Teaching and Learning International Survey (TALIS), New Zealand also had the highest share (43%) of lower secondary principals reporting that bullying incidents occurred at least weekly in their school. Moreover, it faced the largest increase in the incidence of bullying between TALIS 2013 and TALIS 2018 of any OECD country.

**Figure 5. Bullying is a serious problem in New Zealand**

Percentage of students in schools where



Source: OECD, PISA database.

This bleak picture of bullying is confirmed by the latest TIMSS study, in which New Zealand ranks near or at the very bottom in various measurements of bullying for both year 4 and year 8 students. Domestic studies, however, indicate that bullying prevalence has changed little over the past decade, aside from a rise in the cyberbullying rates. The disciplinary climate is also below OECD average in secondary schools but it tends to be better in advantaged and private schools (OECD, 2019a; OECD, 2019b). A sense of belonging to schools for 15-year-olds is also significantly below the OECD average and tends to be better in advantaged and private schools (OECD, 2019a).

Bullying is a determinant of student truancy (OECD, 2019a), whose levels in New Zealand schools attended by 15-year-olds, in 2018, were considerably above the OECD average (OECD, 2019a). It is more prevalent in disadvantaged and public schools. Bullying, poor discipline and school safety, and truancy are all associated with lower wellbeing and achievement of children and dropout rates are higher than in many other OECD countries (OECD, 2019a).

### Greater focus on policy implementation is the key to ensuring better quality and equity

The New Zealand education system has many strengths. The greatest assets of the education system are its deep pool of talented, motivated teachers and principals. Indeed, an above OECD average share of teachers in New Zealand cite contributing to child development and society including the socially disadvantaged as a reason for joining the profession (OECD, 2019b).

The Ministry of Education’s policies have many features that are in line with international best practice, the Education Review Office operates in line with best practice in going beyond evaluation and increasingly working in partnership with schools to advise them in how to improve and high-quality education research

is carried out by New Zealand universities, non-profit organisations (Box 1) and the New Zealand Education Research Council. However, as discussed below, the system seems to be missing a sufficiently deep and well enough funded intermediate support layer to help schools and teachers put policy into action, design detailed curriculum guides and assessments and deliver them as well as spreading best practices more generally.

Experience in Denmark suggests that careful implementation, including ensuring all key stakeholders, are onboard is a pre-requisite for ensuring the success of a national reform. National reforms in 2005 to promote school choice had limited success with only 12% of parents exercising their right to choose and children generally go to the school in their district. This may have been partly due to parents choosing not to exercise their rights as schools are quite similar, but there was also evidence of municipalities using class-size limits and school district changes to block parent choice as well in order to avoid over-concentration of children from migrant backgrounds (Wiborg and Larsen, 2017).

### Box 1. The Education Hub

Founded in 2017, the Education Hub is a New Zealand independent not-for-profit organisation that aims to support innovation and discussions on education policies and facilitate implementation of new research findings in New Zealand classrooms. It plays an important role in spreading research-supported best practices. Drawing on both international and New Zealand research, the Education Hub offers a range of webinars and courses targeted at early childhood and schoolteachers. It also produces special reports and disseminates research reviews that highlight and summarise international research of potential relevance also for a New Zealand setting. In total, the Education Hub online library contains, in addition to the webinars and courses, more than 700 resources spanning 90 different topics. Teachers can participate in the various learning opportunities either as individuals or together with a group of teachers or the whole school. The Education Hub's activities are fully dependent on economic support from individuals and philanthropic organisations, such as the Next Foundation or the Fletcher Trust. Starting in 2024, it will begin charging a small fee for its webinars.

Source: The Education Hub, <https://theeducationhub.org.nz/>

### ***There are obstacles to implementation: a high-trust model suffering from doubt***

Since the 1989 *Tomorrow's Schools* reforms, the New Zealand education system devolves significant responsibilities to schools. Indeed, there is considerable autonomy at the school level to decide on the curriculum, budget allocations within the school and on teacher selection and recruitment (OECD, 2020c). This model has the important advantage of local autonomy, which gives the scope to adjust content and the way education is delivered to make it relevant to the culture and background of the children.

However, there are a variety of obstacles to obtaining better quality and equity out of New Zealand's devolved system. First, there is variable, and in some cases insufficient, capacity to carry out tasks delegated to school boards, principals and teachers. Second, the ability to identify good practice and spread it across the system is restricted by schools being relatively isolated and having limited opportunities for learning from effective practice from across their region or the country. An important barrier to spreading best practices is insufficient system-wide data on how schools and teachers are implementing policy, e.g., the curriculum and the results associated with that. There is also underexploited research data on the performance of all 2500 schools in New Zealand from Hernandez (2019).

Despite these challenges, after 30 years, schools, school boards, principals, and teachers are used to, and value their independence and, as discussed below, there are many centres of excellence in the current

system. These include academics that help transfer education research into practice, teachers who run scholarship level courses at their own initiative to schools where outcomes for Māori are far better than the national average and trusts that run high quality leadership training for principals. The 2018 review of the 1989 “Tomorrow’s Schools” reform that set up this autonomous system called for “structural and cultural” change and transfer of many of school board powers to regional Ministry of Education offices (Ministry of Education, 2018). The proposal to reduce school autonomy was controversial amongst schools, teachers, and principals and was not adopted by the previous government, which instead sought to make the current system work better, notably by improving school board capability.

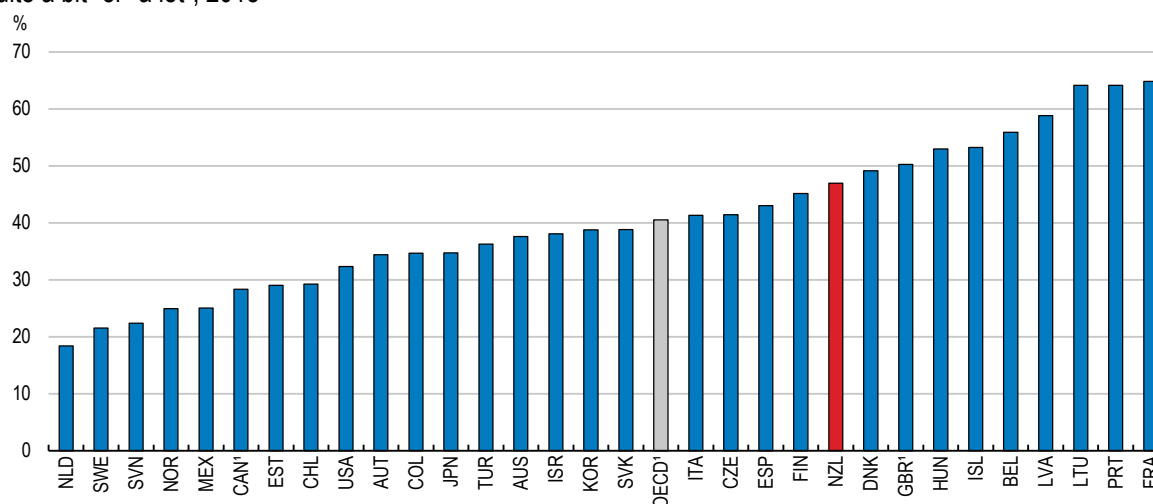
New Zealand should retain its decentralised education system. The decentralised system has many advantages and the solutions do not lie in recentralisation but better implementation of the current system. Recentralisation would involve a huge change, entail high implementation risks and add a further significant policy burden to the government. Experience suggests that even if such a reform was implemented, it would generate significant policy volatility as without the support of teachers, principals and schools, it would likely be reversed in short order.

Indeed, the underlying problem does not seem to be that a lot of schools are run poorly, providing a substantive reason for re-centralisation of decision making. Empirical evidence shows that school quality as measured by student achievements is remarkably uniform once socio-economic background of the children is taken account of (Hernandez, 2019). This is confirmed by the OECD data above that shows across-school variation in PISA performance is quite low by international comparison, while within-school variation is very high (Figure 3). Indeed, there is less segregation by socio-economic backgrounds across schools in New Zealand than the OECD average (OECD, 2023d). Insufficient local support to schools, principals, and teachers to put policy into practice, as well as insufficient preparation of teachers to meet the needs of a wide variety of learners from varying backgrounds, likely negatively affect children in most schools across the achievement spectrum, but particularly the most socially disadvantaged and those with disabilities and extra learning support needs.

There was widespread agreement among interviewed stakeholders that reforms in recent years had been sequenced incorrectly (putting assessment and teacher education reform before curriculum reform) rendering implementation more difficult for schools, principals and teachers. Furthermore, limited central guidance and support means teachers are spending too much time on tasks where there is strong potential for economies of scale, such as the selection of high-quality teaching materials or designing the sequencing of what is taught. Indeed, the share of teachers that report quite a lot or a lot of stress related to changing requirements from the national authorities is above the OECD average (Figure 6).

**Figure 6. National reforms have put New Zealand teachers under above average stress**

Share of teachers for whom keeping up with changing requirements from central authorities is a source of stress "quite a bit" or "a lot", 2018



1. GBR refers to England, CAN to Alberta and OECD to the average of the countries in this figure.

Source: OECD, TALIS 2018 Database, Table II.2.43.

Experience elsewhere in the OECD suggests that a decentralised education system can perform well, subject to strong support systems and institutions (Box 2). For New Zealand this requires greater priority on improving the implementation of the current policy framework. This means lifting all schools' capacity to deliver national policy objectives. This will particularly benefit the most disadvantaged children in all schools by facilitating more time for teaching and less time on, for example, curriculum design from scratch. It also requires improving trust between the Ministry of Education on the one hand and school boards, schools, principals, and teachers on the other hand, which has been eroded by past policy changes not being accompanied by sufficient support to schools to implement them. This is crucial to obtaining the buy-in to policy from schools that will be required to bring about the system-wide improvements the government seeks. As discussed below, the new government's Teaching the Basics Brilliantly and Literacy Guarantee policy to improve outcomes for all children can help address these problems.

### Box 2. Improving learning outcomes and equity in a decentralised education system

McIntosh (2022) identifies several factors associated with performance and equity in a decentralised education system. These include ensuring: a well-articulated and widely accepted system wide vision and goals; schools have clear guidance on expected learning outcomes, for example via detailed curriculum guides and effectively assess whether they are being achieved; national policy shifts result in changes in classroom practice; strong school-family engagement; schools are publicly accountable to stakeholders to meet clearly specified standards; and there are strong professional networks and collaboration between teachers and schools.

The experience of Ireland suggests that a middle regional support layer like the Ministry of Education is developing in New Zealand, can also play an important role in improving outcomes in a decentralised education system. Ireland is an above-average performer in PISA, notably in reading and mathematics (OECD, 2023d). Like New Zealand it has above OECD average levels of school autonomy and schools managed locally by boards. There is also similar to New Zealand more within than between school variation in children's education outcomes (OECD, 2023d) and two language medium school pathways



(English and Irish). Regional education support centres (21 full-time and 9 part-time) linked by an umbrella organisation, on behalf of the Department of Education and Skills, meet the ongoing professional development needs of teachers, school management and parents at local and regional levels. Education support centres are statutory bodies, funded by the Department of Education and Skills, and managed by voluntary management committees elected annually. The centres also organise after-school activities, learning support and training sessions and often provide spaces for teachers, parents, students and community groups to convene.

Source: McIntosh (2022), [www.esci.ie](http://www.esci.ie).

*The Ministry of Education needs to continue developing its more active local support role*

Improving education policy implementation will require the Ministry of Education to redeploy resources towards increasing its operational capacity to support schools. As part of the “Tomorrow’s Schools” reforms, the large Education Department became a small policy ministry. It has since re-expanded and become more operational but does not appear yet to have the capacity, especially locally, to provide the support schools need to implement national policies including the curriculum and assessment and policies to increase the cultural relevance of education.

The Ministry should expand its middle layer service to schools with a provider role at a sub-national level (McIntosh, 2022). New Zealand’s structural deficit and the need to reduce it doesn’t allow for total spending increases and as discussed below total spending on education is around the OECD average and not at a level where increasing it would necessarily improve outcomes. Hence, this expansion should be done by reprioritising spending. The regional offices seem well placed to play a stronger role in establishing direct contact with schools and facilitating advice and support offers that respond to schools’ identified needs. Being closer to the local level than the national Ministry, the regional offices could help ensure that principals and school boards have access to high-quality advice and are able to use their planning and reporting structures for continuous improvement (Nusche et al., 2012). Expanded regional offices could work in partnership with schools to help improve student learning, including sharing effective practice across schools, strengthening data analysis, supporting family, local community and iwi engagement, and enhancing two-way communication between schools and government agencies.

The Ministry of Education is reorganising and going further in the direction of a more operational and regional based organisation. An Education Service Agency, Te Mahau, was established in 2021 and it has expanded since then. It has five groups in total, three regional support groups, North, Central and South (replacing 11 different regional offices) and two national-level divisions (operations and curriculum) that work together. The three deputy secretaries heading these groups, who are also part of the senior management team of the Ministry, can help ensure that national policy will be informed by local experience. Te Mahau’s largest operational function is to provide learning support for children with disabilities or learning difficulties. The Curriculum Centre, Te Poutāhū, which is part of Te Mahau, develops and maintains the national curriculum, provides national resources that supports the curriculum, and provides curriculum advice including with curriculum leads based in the regions. Te Poutāhū was set up to provide expert advice on improving children’s wellbeing. It has subsequently added mathematics and literacy as priority areas for support. Te Mahau is a welcome initiative and should focus on providing expert support and advice, and developing, in partnership with schools, practical strategies for implementing national policy. It is especially important, as further discussed below, that it provides more curriculum implementation advice via more regionally based curriculum leads with specialist knowledge in mathematics, science, reading and other subjects.

Having more curriculum leads in regional offices with specialist subject knowledge would allow more in-person contact between teachers and subject experts and help leads to build trust with and support schools

and teachers. Schools would need to maintain comprehensive documentation of their current practices in assessment, subject curriculum, teacher evaluation and professional development. Ministry regional advisors would need to have the specialist knowledge to suggest ways to improve these practices and the ability to differentiate support according to the needs they identify in schools. These curriculum lead roles should be ones of support and not enforcing compliance or adding to requirements teachers and schools face.

### ***The education system's significant assets could be leveraged more***

New Zealand's decentralised education system has fostered many centres of innovation and excellence led by highly motivated and talented academics, teachers, principals and school boards but they are often too small in scale. They range from regional subject associations to non-profit organisations that provide support services, such as how to put research into teaching practice and leadership training for principals. A key challenge is to leverage these assets and better spread these best practices and knowledge. This would help improve equity in achievement both across and within schools. This can be done through central government support as discussed above. OECD research suggests that teachers and schools openness to innovation can also be encouraged through professional learning communities, including collaboration between actors at the local level (OECD, 2019b). This is because these communities can constantly provide feedback to teachers, supporting incremental change and positively affecting instructional quality and student achievement (Bolam et al., 2005; Louis and Marks, 1998, Kools and Stoll, 2016).

#### *Collaboration between schools should be boosted further*

A longstanding aim of the Ministry of Education has been to promote school collaboration through a variety of programmes including School Improvement Clusters and Learning and Change networks. The most enduring of these school collaboration networks, Communities of Learning | Kāhui Ako, have had some success at the principal level but there is far more potential for collaboration across schools (PPTA, 2017). Vertical (i.e., groupings of primary, intermediate, and secondary schools) communities of Learning | Kāhui Ako school groupings could be complemented with more horizontal and mixed-performance groupings of primary and secondary schools. International experience suggests horizontal school networks in New Zealand involving both principals and teachers would help spread best practices and lift performance in areas such as curriculum design and teaching practice, where knowledge and performance is variable (Hood, 2023).

One of the ingredients of successful collaborations is the authorities using a confidential, data-driven performance assessment to identify higher-performing schools and pair them with lower-performing schools with a similar student profile given the influence of socio-economic background, gender and ethnicity on education outcomes. ERO is in the best position to do this as it identifies during its school evaluations the processes that led to good performance. Another factor in successful collaborations is that they occur between both principals and teachers. For example, the London City Challenge reforms starting in 2002 introduced a collaboration scheme where schools which were designated as “outstanding” based on school-level performance data became teaching schools, which shared their practice with other teaching professionals in the district (McAlevy and Elwick, 2016). The impact was particularly noticeable in Keys to Success schools identified as most in need of support that between 2008 and 2011 increased the percentage of the students reaching the expected level in national qualifications in English and mathematics by more than the national average (Hutchings et al., 2012).

Using a partnering approach that matches successful schools with low-performing ones has also been used in Shanghai. High-performing schools are contracted for two years to turn around the academic outcomes of low-performing schools. Teachers and school leaders from both schools move between the



two schools, building capacity and developing effective practices resulting in a marked performance improvement in low-performing schools (Jensen and Farmer, 2013). Indeed, experience in the Netherlands suggests that participating school support programmes, in which teachers and school leaders work together to improve the quality of teaching and learning is the key to not only lifting performance but excellent performance (OECD, 2016).

#### *An excellence fund to help spread best practice*

Experience in the United Kingdom with the London Schools Excellence Fund suggests competitive funding of best practice spreading projects lifts teacher confidence, subject knowledge, and content-specific pedagogy as well student achievements (SQW, 2016). Competitive funds made available to spread best practice in New Zealand includes the Teacher Led Innovation Fund (2015-19), and the still existing Teaching and Learning Research Initiative administered by the New Zealand Education Research Council. The latter has very limited funding of NZD 1.5 million and funds joint research of practitioners and researchers rather than spreading best practice more widely.

By international comparison, accessibility to education research is perceived low (OECD, 2023c). Very little is spent on putting research into practice in education, by comparison to the health sector where no vaccine will go to market without extensive clinical trials (OECD, 2022a). There also appears to be many experienced education stakeholders whose expertise could be utilised more.

To further spread best practice and leverage the assets of the wider education community, consideration should be given to setting up a government-funded education excellence fund, governed by an independent board with a wide and deep range of expert knowledge in subjects and practical experience with teaching and leading schools. It could fund not-for-profit initiatives of academics, school boards, principals, teacher, community organisations and subject associations. These initiatives may include a programme on best practice design of the mathematics or science curriculum and how to teach them, an advanced or catch-up mathematics course for children from schools across a city, a programme for how to incorporate Māori knowledge into the curriculum and/or specific teaching professional development programmes. Independence of the Board is important for encouraging a wider range of stakeholders to participate and embrace successful methods, approaches or service delivery that may not fit within existing Ministry of Education frameworks or rules.

Experience suggests such a system is likely to work best in gaining teacher and school trust and engagement if the providers of these services are seen as independent. For this to happen, the provider should be left with discretion over how and what to deliver in their programme or initiative. An evaluation of the Teacher Led Innovation Fund found that while there were successes, there was a lack of data analysis underpinning evaluations of the funded projects (Sinnema et al., 2018). A regular data-based funding review could ensure quality and value for money by focusing on whether the programme is improving teacher capacities and student achievement. Experience in London also suggests that investing first in understanding the needs of the teachers targeted by the funded programme is key to success (SQW, 2016).

#### *Spreading best practice from the Kaupapa Māori and Māori medium pathway to the English medium pathway*

Parents have a critical role in the education of children (OECD, 2012b). The high engagement of families with schools is one of the factors identified as contributing to better performance of Māori children in the Māori-medium pathway (ERO, 2021). There are two main pathways with an intensive use of the Māori language: Kaupapa Māori and Māori medium. Kaupapa Māori has a focus on Māori leadership, mātauranga Māori (Māori knowledge) and tikanga (cultural practices) at all levels of governance and

operations, in a near to or total language immersion context. Māori medium, while it has varying degrees of these areas too, focuses more on the provision of teaching and learning in the Māori language, usually within an English medium setting, with varying levels of immersion.

In these pathways, discussed more below, where teaching is done in the Māori language and observes Māori cultural practices, families are heavily involved in an extended school-home education system and take part in the design of strategies to prevent and deal with underachievement (ERO, 2015). Another success factor is teachers knowing the children well, their abilities and achievements but also who they are. This includes having a good knowledge of the strengths and weaknesses of children and leveraging the child's strengths. Some of these goals are easier to achieve in smaller, comprehensive (i.e., year 0 to 13) Māori-medium schools but increasing these practices in the English-medium setting could have a high pay-off as 90% of Māori school-aged children are enrolled in that pathway. Spreading these practices may include support and guidance from Ministry of Education Regional offices and ERO on how and when to engage with parents, family and communities.

*The Education Review Office has an important role to play in spreading best practice*

The Education Review Office (ERO) is set up to carry out school evaluations and sometimes this process has created high stress amongst teachers. ERO has a deep knowledge of best practices based on its evaluations and it has increasingly coupled initial evaluations with more frequent follow-ups and advice to help schools improve their performance. Schools and principals often appreciate this advice (Alansari et al., 2023). This advice function is a strength of the system that can help reduce stress by providing practical ideas rather than orders that must be complied with and should continue.

For this to be most effective requires schools to be receptive to this advice. Experience in the Netherlands suggests that intensive advice to weak schools often turns them around as evidenced by a reduction in the total number of weak schools (OECD, 2016). However, it is not always successful: a virtuous circle of stakeholder motivation to do better will yield better results, but a vicious circle can also occur with a refusal to recognise there is a problem, a rejection of help and conflict with the evaluation agency. A set of OECD studies (van Twist et al., 2013) suggests that there is no simple recipe to ensure a virtuous circle is established. Nevertheless, having a principal strongly motivated to improve the school seems to be a differentiating factor, as well as teachers and other stakeholders feeling that their efforts are being recognised and rewarded and not being punished by the external agency.

***Improving the curriculum and its implementation are critical to lifting achievement***

Reforms to initial Teacher Education in the late 1990s and early 2000s that left new teachers ill-prepared for teaching (ERO, 2017; Johnstone and Martin, 2023), reinforced by a lack of subject specific content and knowledge in the national curriculum are two key explanations for the trend decline in education achievement and highly variable results within schools. As discussed below improving teacher quality is one of the main levers for improving outcomes for children. Research and international experience in Estonia, Portugal and the United States shows that a more knowledge-rich curriculum leads to better outcomes for children.

*Content in the national curriculum should be set out more precisely*

The 2007 national curriculum (Ministry of Education, 2007) for years 1-13 for all subjects is only 67 pages long and currently under reform. It provides only high-level guidance and little subject-specific content (OECD, 2020d). More detailed subject curriculum guides accompanied the similar 1993 high-level curriculum but not the 2007 curriculum. The choice of topics and knowledge to be taught to meet the broad

achievement objectives set out in the curriculum has therefore been largely done by schools. This allows schools to tailor what is taught to local circumstances and the composition of their student body, including ensuring the material is culturally relevant. The curriculum's adaptable, competency-based focus is also in line with international best practice (OECD, 2020b).

The ultimate aim of school education should be building competencies that will serve a learner in higher education and throughout their careers and lives and not a list of specific knowledge. However, a prerequisite for building competencies such as problem solving and critical thinking is knowledge of fundamental concepts and the current high level of discretion at the school level appears to have led to a wide variety of what is taught and therefore the knowledge and more importantly competencies that school leavers have. Research indicates that a knowledge-rich curriculum in primary school is associated with better academic results (Grissmer et al., 2023; Hood, 2023). The introduction of a curriculum that all children must follow, and which details learning outcomes, the concepts that should be learned to acquire these specified competencies, along with detailed sequencing and hours of instruction requirements, helped Estonia lift performance in PISA (OECD, 2014).

It is important to keep the competency-based national curriculum to help minimise the lag between the current curriculum and children's future needs for their careers and lives (OECD, 2020d). However, a national curriculum also needs to give sufficient guidance about what core knowledge children will need to build these competencies as they move through the school system. Clear specification of knowledge, skills and values helps teachers better understand what children should attain and parents to help their child and check their progress. A well specified set of core knowledge concepts that children need to learn at each stage of education can help smooth transitions to the next stage. Transitions can be further enhanced through diagnostic testing for example as a child shifts from early childhood to primary education to identify remaining gaps. This is especially important to avoid a long tail of low achievers developing.

All New Zealanders whatever their background expect and want an education system where all children leave school literate and numerate and with knowledge of fundamental concepts. Testing of even better performing children that are entering higher education reveals that they have knowledge gaps that are essential building blocks for developing key competencies, as well as more advanced studies. This is compounded by insufficient curriculum guidance about a topic, concept, idea to be taught, which can lead to children being taught some things twice and missing out on being taught other important concepts altogether.

The Ministry of Education is refreshing the curriculum programme over a period of six years from 2021. Key competencies are specified across the whole curriculum, with a Understand (big ideas), Know (specific content) and Do (practices) framework for each learning area. The Know element aims to address insufficient content issues in the curriculum. The new curriculum framework appropriately sets out content to be learned in phases defined by school year (years 1-3, 4-6, 7-8, 9-10, 11-13). An age bracket approach is in line with how teachers deliver the curriculum in practice in most schools. It is also consistent with how most children learn (OECD, 2020b).

Building on this refresh work, a welcome step in improving the curriculum is the Minister of Education's appointment of a Ministerial Advisory Group to provide advice to the Minister on the English, mathematics and statistics learning areas for years 0 to 10. Under the government's Teaching the Basics Brilliantly policy, the government is further reinforcing curriculum reforms to improve outcomes in literacy and mathematics by introducing the requirement for schools to teach year 0 to 8 children on average one hour per day each of reading, writing and mathematics. This will mean the share of instruction time devoted to these subjects will be 2/3 (based on a typical 6-hour primary school day assuming 1.5 hours for breaks) compared to an OECD average of 41% and one of the highest in the OECD (OECD, 2023f). An important element of this programme is that schools will be supported in implementing it by the Ministry of Education providing best practice guidance on timetabling. The quality of this extended teaching time should improve

with the government's introduction of a ban on mobile phones, which based on the PISA 2022 Survey appear to be more disruptive to learning in mathematics in New Zealand than the OECD average, with 46% of students reporting being distracted using digital devices, compared to an OECD average of 30% (OECD, 2023g).

The Aotearoa New Zealand histories curriculum refresh has been completed and took effect in 2023. However, it is also important that the history curriculum reflects the increasingly multicultural nature of New Zealand. Around 27% of the population was born outside New Zealand. European, Māori, Asian and Pasifika accounted for 70%, 18%, 17% and 9% of the population respectively in 2023. Although the histories curriculum provides opportunities for exploring multicultural New Zealand, broadening it further can help to build an understanding in all New Zealand children of how it became the country and society it is today.

Mastering any competency requires a learner to progressively, and to some extent sequentially, build knowledge and understand certain concepts. Mathematics learning is particularly sequential: without knowledge of how to do certain tasks (e.g., addition, subtraction, division, multiplication), it is very difficult to learn how to solve more advanced problems (e.g., a quadratic equation). Mathematics achievements will therefore be more likely to be negatively affected by a lack of precision in what must be taught and this is what appears to be happening, since this is the area where performance in PISA and other international tests has declined the most. The Ministry of Education's draft refreshed curriculum for mathematics and statistics (Ministry of Education, 2023b) specifies in more detail than the existing curriculum the specific content and what phase (year bracket) and year of schooling it should be known by. The refreshed curriculum is also being accompanied by development of a Common Practice Model that details pedagogical practices for teaching mathematics and literacy. These are steps forward but continued consultation with mathematics teachers and their representatives to develop more detailed advice is key, as is adjusting the NCEA assessment changes to the curriculum and refining the Common Practice Model. In this regard, the Education Review Office and the Ministry of Education are jointly monitoring the curriculum refresh and the first monitoring study (using data collected in 2023) will be published in 2024.

The importance of wide consultation with subject experts and precision in the content of the curriculum is illustrated by the development process for the science curriculum in 2023. An initial draft of the science curriculum was circulated to much controversy. Its drafters argue that more children will engage with science if it is taught via today's big issues like climate change and that basic concepts will still be covered (Tolbert, 2023). However, science teachers and scientists criticized it for being too narrow, lacking content (e.g. how atoms and electricity work), not mentioning core natural science subjects such as biology, chemistry and physics, and not specifying the basic knowledge required to be able to study these applied problems (Gerritsen, 2023; Seah, 2023). Experience with the 2007 curriculum in New Zealand suggests that these concerns about a lack of specific content were warranted and the new curriculum has appropriately been put on hold for review and discussion with the new government. The core knowledge that is taught should not be left to chance as a lack of precision in the content has led to highly variable student outcomes (Hood, 2023). A Ministerial Advisory Group's mandate should also eventually be extended to the science curriculum.

### *Teachers should be given more support to implement the curriculum*

A risk to equity associated with granting greater autonomy over the curriculum is that schools do not all have the same capacity to achieve objectives set out in the national curriculum (McIntosh, 2022). This capacity is key as research finds that teachers with strong subject knowledge and content-specific pedagogy skills are those that are most likely to improve students' outcomes (Leu, 2004; Goe and Stickler, 2008).

More specialist subject support to lift teacher capacity to design and implement the curriculum they will teach is needed. The Ministry used to have specialist subject advisors and they should be re-instated.

Indeed, a past specialist subject advisor pilot programme was highly welcomed by the teachers who benefited from this advice, the majority of whom reported an increase in knowledge of their subject and assessment practices as well as confidence to carry out many teaching tasks (Taylor et al., 2008). Currently regional support services housed in Te Mahau include some 70 regionally-based wellbeing curriculum leads, who advise teachers on how to design a curriculum that fosters student wellbeing, adapted to local culture and giving effect to the Treaty of Waitangi – norms set out by the courts for guiding the relationship between the Crown and Māori including partnership. There should also be appropriately qualified specialist subject curriculum lead advisors in, for example, history, reading, writing, mathematics, or science. The priority should be on advisors for the primary and intermediate levels and schools where outcomes are poorer in terms of excellence or equity. Indeed, secondary schools are organised into subject departments, that operate together to develop a curriculum, usually led by very experienced teachers with specialised higher-education level qualifications in the subject areas. By contrast, primary teachers have less within-school support networks to help them develop how to teach subjects (Hood, 2023).

The new Ministry of Education subject curriculum lead advisors could be similarly highly experienced teachers with higher education level qualifications in the specialised subject area. These posts could be partially filled on a rotational, extendable, secondment basis by current senior teachers, with an automatic right of return to their school positions. This would not only inject more specialist knowledge but also help build up links and trust between the Ministry and teachers and schools. Moreover, drawing the advisors from secondary schools would help ensure children have the requisite knowledge and competencies to enter secondary school.

As well as more detailed content in the curriculum and greater advisory support, it is important to provide more guidance to schools on expected learning outcomes and how to conduct effective assessment of whether those outcomes are being achieved. Part of this implementation support should be to provide more materials including assessment tools and a range of textbooks and other teaching materials aligned with the content and goals of the curriculum. Schmidt et al. (2022) showed that while the New Zealand curriculum emphasises higher-order problems, the share thereof in New Zealand textbooks was lower than the average for the 19 countries they considered.

Although local presence and in-person contact is important for building trust and a strong relationship between curriculum advisors and teachers, advisors could also usefully complement this with regular use of digital technologies. Online courses and communities and dialogue have the potential to significantly enhance teacher professional development and learning opportunities (Minea-Pic, 2020). Take-up is likely to be stronger for specifically tailored content. Teachers appear to have a greater tendency to make use of such tools than some other professions. Using digital technologies would also allow advisors to leverage scarce resources to provide more frequent feedback and support to teachers than via in-person activities alone.

### ***Student assessment should focus more on individual progress and encourage deeper and broader learning***

Valid and reliable evaluation and assessment that leads to improvements of education practices and lifts student learning are key to establishing a high-performing education system (OECD, 2013). There is no single best-practice model for an assessment system, but it is important it is based on a high quality, coherent curriculum, standards and learning progression documents, uses a wide range of assessments and sets clear external reference points in terms of expected levels of student performance at different levels of education. Research points to gaps in the current assessment system in New Zealand. A review of assessment in primary schools found that while it has improved in the decade from 2007, there was still a high level of variability in assessment quality across teachers and schools (ERO, 2020). Not enough is known



about what children are taught in key subjects and what the outcomes are (McNaughton, 2020). There is no systematic approach to diagnose the needs of children upon entrance into primary education. This is particularly problematic because the ability of children at five when they enter school is highly variable due to variance in family background (McNaughton, 2020). There is also insufficient measurement of individual child progress against achievement standards and systematic school level reporting to administration throughout primary and secondary schooling. Digital technologies could also play a greater role in giving detailed feedback and facilitating personalised learning (Gottschalk and Weise, 2023).

A data framework for collecting individual achievement progress and regular school level reporting by age and gender, ethnicity etc on progress against national standards was abandoned after 2017 over teacher concerns that this was an unfair way to measure teacher and school performance and would lead to ill-informed decisions by parents about where to send their children and growing segregation by socio-economic and ethnic background. The latter seems to have occurred despite the dismantling of the data collection and reporting framework. In the absence of better data, parents appear to be basing their decision on the misleading socio-economic status of the school.

There is an urgent need to complement the existing assessment system by systematically better measuring how much individual progress children are making against well-specified standards. The Ministry of Education is taking important steps to address this gap including: building on the National Monitoring Study of Student Achievement (NMSSA), there will be a new Curriculum Insights and Progress Study (CIPs) expansion of to provide new information about progress at years 3, 6 and 8; introducing new regular assessments of students in reading, writing and mathematics from years 3 to 8; introducing common reporting templates so parents know how their child is progressing in these core areas; introducing a new assessment near the end of year 2 to check basic skills like counting, phonics, and letter formation.

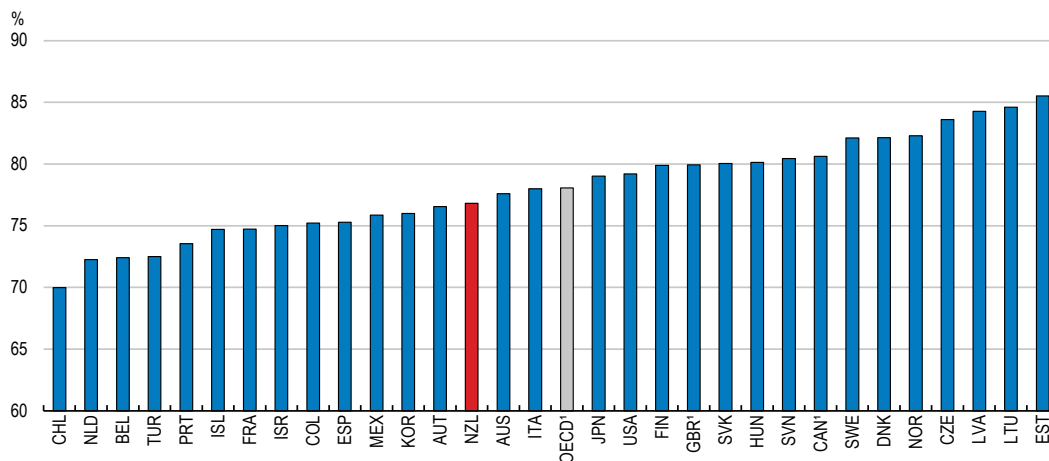
Building on these individual initiatives and existing data on progress, a revised national data collection and reporting framework that focuses on children's progress towards common achievement standards in literacy, numeracy, science etc. should be rapidly re-instated. Possible choices for this are assessment tools already used in primary schools such as e-asTTle and PATs. There should be regular confidential reporting to ERO and the Ministry of Education at the school level, focused on teacher-based summative assessment, to determine where problems and successes lie. Researchers should also have access to this data on a confidential basis to understand the performance of the school system.

More data is essential to determine where more resources, both advice and financial, need to be directed and to identify best practices that can be spread more widely. The standards themselves need to be common across schools but the assessment against these should remain with teachers. Indeed, this responsibility is core to being an effective teacher. International experience (OECD, 2013) suggests that implementation will be more successful if teachers are provided with a wide range of assessment materials and methods to choose from, teachers are regularly appraised on their assessment capabilities, and there are regular opportunities to build teacher capacity to carry out assessments (e.g., through professional training, involvement in school collaborations). This is a key area where the central agencies including the Ministry of Education, ERO and the New Zealand Qualifications Authority as well as the wider support network of education trusts and associations should focus support. The Ministry of Education provides an online achievement tool, the Progress and Consistency Tool (PaCT) to help teachers implement assessments but one of the concerns in the abandoned national standards system was creating too much assessment work. Teacher time to carry out assessments could be further reduced by enhanced support to teachers for designing assessment including materials and advice from ERO, specialist Ministry of Education curriculum advisors, school communities of learning and education trusts.

At the secondary school level, the National Certificate of Education Achievement (NCEA) is the main school leaving qualification. It was introduced in 2002 and is a standards-based qualification divided into three levels and earned in years 11 to 13. Children must obtain a total number of credits for each level earned by passing individual standards. NCEA has been criticized for making secondary education too assessment intensive, taking away too much time from teaching. Assessment takes considerable time because under NCEA subjects are divided into many smaller units, each of which is assessed individually and mostly internally, i.e., at the school by the teacher (Lipson, 2018). Typically teachers have classes at both lower and upper secondary level, and the extra time spent on assessment in the upper secondary part of their job may help explain the share of classroom time New Zealand teachers spend on teaching activities at lower secondary level being below the OECD average (Figure 7). This is a concern as the higher the share of classroom time teachers spent on teaching, as opposed to other tasks, the better student performance, notably in mathematics (OECD, 2021).

**Figure 7. Time spent on actual teaching and learning is below the OECD average**

Results based on responses of lower secondary teachers and principals, 2017-2018



1. GBR refers to England, CAN to Alberta and OECD to the average of the countries in this figure.

Source: OECD, TALIS 2018 Database.

NCEA's flexibility and high share of internal assessments is appreciated by many teachers. It allows them to schedule assessments when they wish and alter the length of the courses to meet student needs and also allows project-based courses, mixing material from different subjects. However, the standards have also been criticized for being too narrow and not incentivising deep and broad learning, having unclear pathways to future education and employment including not preparing children well for higher education and encouraging an overly credential-focussed orientation to learning by children and teachers (NZCER, 2018). The system incentivises children to seek easier standards, because all standards are considered equal in terms of the credits and schools are incentivised to encourage them to do so in a bid to raise school NCEA achievement rates. Finally, dividing subjects into so many units risks that children's knowledge is too narrow and missing concepts because they only do some of the units. The narrow knowledge base then becomes a barrier to mastery of overall competencies, and this does appear to have occurred, as evidenced by higher education entrance tests revealing key knowledge is missing to study degrees such as engineering.

A process to reform NCEA started with public consultations in 2018 and the reforms were approved by the Government in 2020. They include a new compulsory literacy and numeracy co-requisite with new standards that must be passed to be awarded NCEA at any level. The new NCEA level 1 certificate will be implemented in 2024. However, in an acknowledgement of the implementation burden these changes are

putting on schools and teachers, the introduction of level 2 and level 3 reforms has been delayed by one year to 2026 and 2027 respectively to allow more time for schools to implement the new co-requisite.

The new level 1 qualification is optional and many schools with a high socio-economic status (SES) rating, where children are unlikely to leave school before obtaining level 2, have decided to opt out to allow for more time for teaching and less for assessment. For lower SES schools and those with a high Māori and Pasifika roll, level 1 is more important as it may be the only school qualification the children will obtain. From an equity perspective this diversity in approach is concerning. It may devalue the reputation of the level 1 qualification and it would be preferable to keep refining level 1 in consultation with schools to obtain greater participation from higher SES schools. To encourage this, reforms of level 1 should ensure that it is relevant to students continuing to level 2 and 3, while also streamlining the assessments to reduce the time involved.

Given declining performance in reading, writing and mathematics the new literacy and numeracy co-requisites are a welcome development and will help to broaden the core standards that children must achieve. Pilot testing of these minimum competency standards resulted in low pass rates illustrating the size of the performance challenge the education system is facing. Indeed, although it increased from earlier pilots, 35.6%, 44.7% and 44.1% of children still failed to meet the reading, writing and numeracy standard respectively in the June 2023 pilot. Standards in NCEA are either achievement standards, with grades of achieved with excellence, achieved with merit, achieved and not achieved, or pass/fail unit standards although they are sometimes awarded with merit or excellence too. A pass is appropriately the compulsory requirement to obtain NCEA, to ensure those children obtaining NCEA have sufficient literacy and numeracy skills for pursuing their lives and careers.

The co-requisites should be standards with a progressive achievement grading, or the standards should be offered at different levels. More levels would give children the opportunity to strive to do their best and not just “pass”. A high-level co-requisite attached to university entrance level qualifications, NCEA level 3, could help ensure students have the necessary literacy and numeracy for higher education in arts, economics, engineering, science and mathematics etc.

Implementing the plan to have fewer and larger standards that are more similar in credit size (Ministry of Education, 2019a) as well as rebalancing assessment towards external assessments is one of the most important parts of the NCEA reform (Lipson, 2018). If implemented well this should reduce teacher workload, incentivise more comprehensive learning and reduce credential-focussed learning. To inform a continuous improvement of the assessment framework and ensure that research informs practice, it is also important that the Ministry continues to commission independent research into the performance of NCEA.

### ***Teachers need more support from initial teacher education to the end of their careers***

A review of the research on student learning finds that teaching quality is the within-school most important determinant of a child’s learning (OECD, 2005). The organisation of the teaching profession in New Zealand has a strong framework. Teachers have significant autonomy to exercise their professionalism in teaching and assessing children. A professional body, the Teaching Council Aotearoa New Zealand, has the main responsibility for defining professional standards. This allows some self-regulations and autonomy over the development of the profession. A teacher appraisal system is in place which is for teaching registration and also for salary progression, i.e., the teacher being appraised gains access to the next salary step only if his or her appraisal is deemed satisfactory. There is also a good level of collaboration between teachers within schools. Indeed, peer mentoring in lower secondary education is considerably more common than in other OECD countries (OECD, 2019b), with teachers engaging in collaborative professional learning and receiving more feedback (OECD, 2020c).

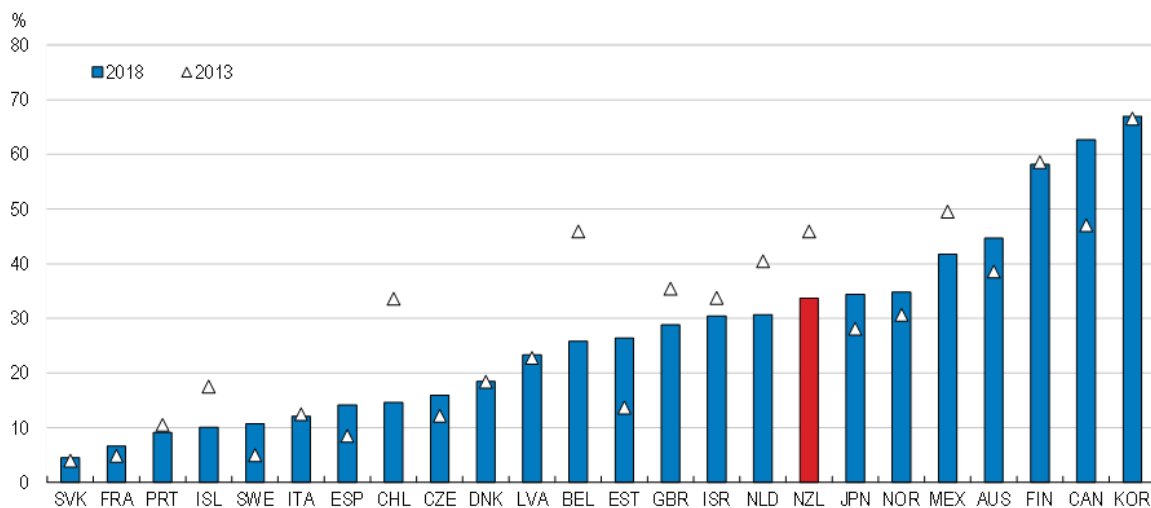


*The attractiveness of the teaching profession seems to be eroding*

While the perceived societal value of teaching remains higher than the OECD average (in 2018, in lower secondary education), it fell from 2013 to 2018 (Figure 8). Teachers also perceive that they are not valued enough and TALIS (2019) revealed that the share of New Zealand teachers reporting that raising teacher salaries should be a spending priority is above the OECD average. It is generally recognised across the OECD that teachers' remuneration should be competitive with that of similarly educated adults working in comparable occupations to attract and retain high-potential candidates (OECD, 2019c). Indeed, a comparison done in 2021 revealed primary teachers have been paid below similarly educated workers (OECD, 2022c). The June 2023 collective agreement settlement that increased primary school teacher salaries and allowances as well as out-of-classroom time should help alleviate these concerns. However, maintaining competitive teacher pay to attract new talent will remain important.

**Figure 8. Teachers perceive that society values their work less**

Share of lower secondary teachers who "agree" or "strongly agree" that the teaching profession is valued in society



Note: GBR refers to England, CAN to Alberta and BEL to the Flemish Community.

Source: OECD, TALIS 2018 Database.

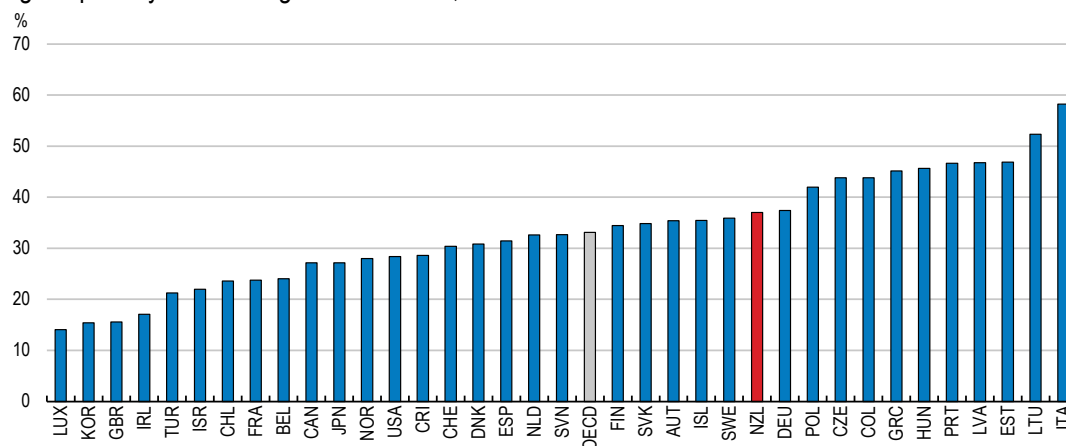
After a COVID-related surge in 2021 overall initial teacher education (ITE) enrolments dropped back sharply in 2022 to around pre-COVID levels (Ministry of Education, 2023e). Nevertheless, student enrolments have been slowly rising, suggesting that ITE numbers will need to rise to maintain student-teacher ratios (assuming the share of ITE graduates staying in the teaching profession remains constant), especially as the teaching workforce is relatively old (Figure 9) and the percentage of teachers aged 50 or less wanting to leave teaching within the next five years is higher than the OECD average (OECD, 2020c).

Raising the attractiveness of the profession is not only about pay but also ensuring good working conditions. Indeed, the perception of difficult working conditions is higher in New Zealand lower secondary schools than in the OECD area. In lower secondary education, NZ teachers have among the highest total working hours across OECD countries (OECD, 2019b). The percentage of teachers who experience stress "a lot" in their work and reporting that too much administrative work is a source of stress is higher than the OECD average (OECD, 2020c). A further sign of stress are the high levels of turnover from one school year to the next (the highest level in the OECD) and driven in particular by very high levels of turnover in rural/remote schools (OECD, 2020c). Efforts to support teachers and schools, as discussed above,

including greater central guidance on curriculum implementation, assessments and administrative tasks can potentially help to reduce workloads and stress for teachers.

**Figure 9. The teaching workforce is relatively old**

Percentage of primary teachers aged 50 and over, 2020



Source: OECD, Education at a Glance.

### *Raising the quality of teaching is a key lever to improve achievement for all children*

Nearly all children and adults will cite a high-quality teacher or teachers as making a crucial difference to their education, careers and lives. Indeed, empirical work suggests that high teacher quality - an experienced teacher with strong subject and knowledge, advanced pedagogical practice and well-developed behaviour management - is an important determinant of a child's learning (Egert et al., 2023). Teacher support is also particularly important for a child's achievement in times of disruptions such as COVID-19 (OECD, 2023d). International experience also shows countries that are successful in improving outcomes for underperforming children in mixed performance classrooms, such as Finland, have a strong practical component to ITE. This practical part focuses on developing independent professionals, with judgment and expertise in both subject matter and pedagogical alternatives that results in a highly qualified and effective teacher workforce (Field et al., 2007).

Flexible and differentiated teaching required to help all children that are at different stages of development in the same classroom is a challenging task for a teacher, that requires strong preparation (Field et al., 2007). As discussed below, reducing class size has a role to play in ensuring teachers can achieve this objective, especially in schools with many children from lower socio-economic backgrounds but this is an expensive policy. Investing in better teachers is complementary and provides a cost-effective alternative (OECD, 2017c). Ensuring new teachers are well prepared for the classroom is also crucial for increasing teacher retention rates.

ITE requirements to become a primary teacher in New Zealand are met either by completing a three-year Bachelor of Teaching degree or another Bachelor's degree and then a one year post graduate teaching diploma. This is then followed by a two-year induction programme after which a teaching graduate is eligible for full teacher registration for which they must meet standards imposed by the Teaching Council, the teacher professional body responsible for registration. To become a secondary teacher requires completing a specialist subject degree at bachelors' level or higher and then a one-year post graduate diploma and a two-year induction period before registration.

There are indications that the ITE process is not preparing new teachers sufficiently for the high demands they will face in the devolved school system, and that both knowledge and pedagogy content in the ITE curriculum and links between ITE providers and schools need to be strengthened. OECD data show that a sizeable proportion of teachers in New Zealand do not feel fully prepared in core teaching areas, content of subjects, pedagogy, teaching cross-curricular skills (Table 1). This lack of preparation is contributing to high stress levels among new teachers who face an extremely steep learning curve and high workloads to “catch up” when they start their careers. It also raises the risk that new teachers will leave the profession altogether.

**Table 1. A high share of teachers do not feel well prepared in core teaching areas**

Sense of preparedness for teaching, percentage of teachers

	Content of some or all subjects taught	Pedagogy of some or all subjects taught	General pedagogy	Classroom practice in some or all subjects taught	Teaching in a mixed-ability setting	Teaching in a multicultural or multilingual setting	Teaching cross-curricular skills	Use of ICT for teaching	Student behaviour and classroom management	Monitoring students' development and learning
New Zealand	71.5	65.1	69.4	72.3	48.9	44.6	40.8	33.9	57.2	49.5
OECD average	80.1	71.3	70.1	71.0	44.1	25.5	49.2	42.8	53.1	52.9

Note: Percentage of lower secondary teachers who feel “well prepared” or “very well prepared”. OECD average comprises 31 countries.

Source: OECD (2019), Table I.4.20.

Most secondary school teachers have a specialist degree (77.9% hold a bachelor’s and 13.4% a master’s degree, compared with OECD averages of 49.3% and 44.2%, respectively). However, a lack of content knowledge and associated pedagogy (i.e., how to teach it) is more of a concern at the primary level, especially in mathematics and science (Martin et al., 2021; Johnstone and Martin, 2023). The mathematics component of ITE has been reduced (Martin et al., 2021). Only 4% (5%) and 15% (13%) of year 4 and year 8 primary teachers have a specialised focus in mathematics and (science) (Education Assessment Research Unit et al., 2019a;2019b). This lack of focus is concerning not just because mathematics and science are important subjects per se, but they involve specific pedagogical challenges due to their hierarchical nature and the need to carefully sequence what is taught.

International evidence shows that teacher subject-related degrees and knowledge have a positive relationship with children’s performance, especially for Master’s degrees in mathematics and science (Coenen et al., 2018, Hanushek et al., 2018). More subject content and pedagogy should be included in ITE programmes in these areas. Curriculum development for initial teacher programmes should draw from subject experts in mathematics, science, reading, history, geography, etc. It should receive guidance from a broad set of expert stakeholders, including academics in higher education institutions, practitioners working in schools, and professional associations (OECD, 2019c).

A coherent and comprehensive initial teacher education curriculum covers both content and pedagogical knowledge, and develops practical skills linked to theoretical knowledge (OECD, 2019d). There are mechanisms linking the theoretical and practical components of ITE, including observation of student teachers in schools when ITE students are participating in practical blocks in schools. However, this observation is often carried out by a contractor rather than ITE staff themselves. In addition, teacher education institutions do not receive systematic information about how their ITE students perform in schools post-graduation, and mentors are often relatively inexperienced teachers themselves (Johnstone and Martin, 2023).

Under the auspices of the government's Teaching the Basics Brilliantly policy the Ministry of Education is committed to introducing an ITE exit exam to demonstrate expertise in reading, writing, mathematics, and science instruction. This is unusual in OECD advanced countries but can ensure that ITE is preparing new teachers, reducing their stress, and also play a diagnostic role to identify post-graduation development needs for new teachers. It is important this testing is accompanied by changes to ITE to ensure teacher trainees are better prepared in these subject areas. A stronger partnership between ITE providers and schools is key to improving ITE and raising new teacher capability (Education Workforce Advisory Group, 2010). International experience shows that high-performing countries and schools have an initial education or induction period that includes a mandatory and extended period of in-classroom experience and a variety of opportunities for in-service professional development; and teacher-appraisal mechanisms with a strong focus on continuous improvement (Smidova, 2019; OECD, 2019d).

The Teaching Council in 2019 reformed ITE increasing required practical experience placements in 1-3-year ITE programmes, as well as requiring that every aspect of the ITE programme is integrated to link more seamlessly "theory" and "practice". Only as of January 2022 have all ITE programmes have been approved under the updated requirements so it will take some time before their effect is known. The outcomes of these reforms should be closely monitored as discussed further below including surveying new teachers and principals and ITE requirement adjusted further if necessary.

However, teacher education doesn't stop at graduation and the above reforms could be complemented with a reinforcement of the current post graduation induction by making at least the first year of teaching registration a more structured post-graduate education year, that retains a substantial component of classroom teaching but with more opportunities for in-service professional development courses and a focus on developing and demonstrating content knowledge and pedagogical capability to fulfil registration requirements. To facilitate this first-year teachers would need their non-class contact time increased significantly. They would also need an accredited and experienced mentor, with greater support by the ITE provider, including more regular direct observation of the student teacher by the ITE provider and meetings between mentor and provider.

Mentor experience requirements should be increased. More centralised guidance on the curriculum to be taught to children and teaching materials as well as more centralised support to schools, as discussed above, should help to free experienced teacher time for mentoring and covering an expansion of first-year teacher non-contact time. However, it is also likely that extra spending on experienced teachers will be required to cover the extra non-contact time of graduate teachers. Given the cost, this more structured post-graduate year could be piloted in some schools and different settings. As discussed below, when the overall fiscal situation allows, the programme could be broadened out as a priority investment given the returns from improving teacher quality for not only lifting student achievements but also improving equity.

Although 90% of ITE is provided in universities, there are many other smaller providers including institutes of technology, wānanga (Māori-based tertiary institutions) and accredited private training establishments. Encouraging so many providers to increase content knowledge and pedagogy and engage more with schools in a formal training year could be achieved by changing the accreditation standards for ITE programmes, so they are more focussed on these requirements (Johnstone and Martin, 2023). A step in this direction is that, under the government's Teaching the Basics Brilliantly and Literacy Guarantee policy, the Ministry of Education is required to work with the Teaching Council to make structural literacy a component of teaching education. For this reform to be durable requires bi-partisan political support and therefore for all the current actors to be on board. Reforms to ITE should be also accompanied by a systematic survey of teachers in their first two years, as well principals to enable teacher education programmes to collect information about where new teachers feel they have been most and least successful, and whether the new teachers are meeting their school's needs. This information could also

be used by the Teaching Council in standard setting the teacher and provider accreditation process. Finally, it is important that the gains in teacher quality from better ITE are not lost through neglect of subsequent professional development. Like other professions, teachers need the incentive ( as discussed below) to engage in lifelong learning and access to high quality ongoing professional development, networking and training opportunities to help them stay at the frontier of pedagogical practice and their specialised fields. Conflict with work schedules, i.e., appears to be one of the main barriers to greater participation in professional development across countries (OECD, 2009).

*More career paths should be available for teachers*

The current system of teacher appraisal and progression has several strengths. Classroom observation takes place, there are professional interactions between the teacher and school leadership, and there are opportunities for peer feedback. It is a trust model, mostly internal to the school, which seems to be well ingrained in the schools' culture (OECD, 2020c). Teacher appraisal also seems to inform teacher professional development (OECD, 2020c). And levels of teacher professional development seem to be relatively high, at least in secondary schools (OECD, 2020a; 2019b).

However, teacher appraisal practices across schools vary in quality and extent depending on the capacity of school boards and school leaders. There is no mechanism to ensure minimum standards for teacher appraisal processes in schools and no guarantee each teacher receives proper professional feedback. There is also a lack of clarity in schools about which standards are used for teacher appraisal processes and there is an opportunity to better recognise performance and provide a wider range of rewarding teaching careers (Nusche et al., 2012).

The overall policy objective should be to better align expectations of skills and competencies at different stages of the career (as reflected in the teaching standards) and the responsibilities of teachers in schools (as reflected in career structures). This should start by unifying the two existing sets of standards (Teaching Council for teacher registration and teachers' collective agreement for career steps). For teachers who want to stay in teaching as a long-term career, the current career and pay structure limit the possibilities for rewarding strong performance without progressing into management.

Teacher retention and motivation would be improved by greater recognition of teachers' skills and expertise (Education Workforce Advisory Group Report, 2010). There should be more opportunities to remain in fulltime teaching, while receiving recognition for advancing teacher skills. This could be done by revising teacher standards and requiring these be met at higher levels to advance in a more tiered career structure for teachers as previously recommended by the OECD (Nusche et al., 2012). In New Zealand, there are many opportunities for teachers to take on extra responsibilities that confer extra pay and status. The Communities of Learning | Kāhui Ako Kāhui Ako Across School and Within School Teacher roles also create an opportunity for teachers to temporarily take up a post where they spread best practice. However, what seems to be missing is a permanent pathway for teachers to be rewarded and recognised for their growing mastery of teaching without going into management. There are only seven annual salary and career steps in the classroom teacher scale, which is low in international comparison.

Internationally, more innovative career systems have career ladders divided into several tracks (OECD, 2019c). For example, in Singapore one of the three tracks is teaching and the track is divided into several levels of seniority from classroom to senior teacher to lead teacher to master teacher (Singapore Ministry of Education, 2021). Teacher standards for progression in a Master Teacher track would need to be more centred around subject knowledge and pedagogy than is currently the case. These could be set together with a revised set of teacher registration standards focusing more on these areas as discussed above to ensure that ITE prepares new teachers well for following the Master Teacher track if they chose to do so.

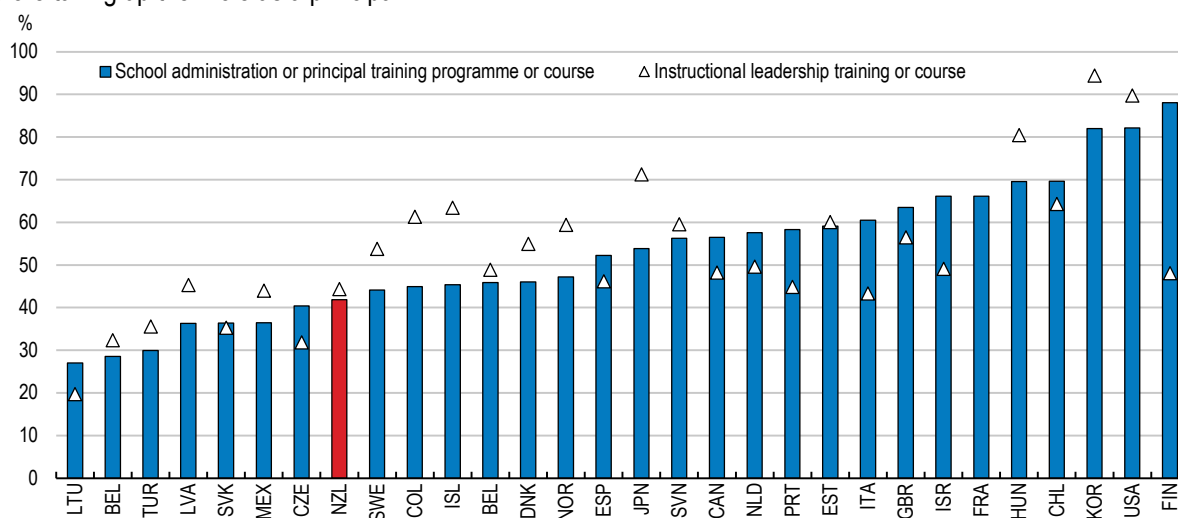
### There is room to ease the burden on school leadership

The effects of school autonomy largely depend on the ability of schools to make use of it to manage resources effectively (OECD, 2017c) and this depends on school governance. The school board is the governing body of the school, composed of five elected parent representatives, the principal, a student (secondary schools only) and a teacher representative. The board is the employer of staff and has responsibilities for setting targets and reporting on them, management of school curriculum, financial and property management, health and safety and policies and procedures, student achievements and discipline. The board also plays a key role in supporting principals in their planning, reporting and self-review tasks and in evaluating them. Many of the board's responsibilities are delegated to the principal on a day-to-day basis but the school board is ultimately collectively responsible for all governance decisions.

The School Trustees Association, funded by the Ministry of Education, provides support services to boards including principals. Around 90% of New Zealand's 2 500 schools are members. The Association employs people with a background in school governance (e.g., former board members) as well as specialists in areas for which boards are responsible (e.g., employment lawyers). It also helps spread best practice via a large annual national conference and in advisory services to schools. Most boards have very qualified board members but some schools, notably in lower socio-economic areas, struggle to find parents with the necessary experience to carry out their governance role. The Association's expertise built up since the devolution of governance to schools in 1989 could be used more to spread best practice in governance by making it the organiser of school governance learning communities that group together school boards. These could play an important role in assisting less qualified boards as well as principals (Figure 10). Also, the staggered board election system, where some of the board faces re-election every 18 months, could be replaced by a minimum three-year term for all board members to build stability and give them the chance to build experience.

**Figure 10. New principals have not received enough training**

Percentage of lower secondary principals for whom the following elements were included in their formal education before taking up their role as a principal<sup>1</sup>



1. Data refer to the sum of the percentages of school leaders trained "before taking up a position" and "before and after taking up a position" as principal. GBR refers to England, CAN to Alberta and BEL to the Flemish Community.

Source: OECD, TALIS 2018 Database.

Despite a solid school governance support system, the burden on school boards and principals is high and they are not always well prepared (Figure 10). The burden on school leadership could be alleviated by re-



centralizing with the Ministry of Education board responsibilities where there are large economies of scale, and which take a lot of board time that could be refocused on lifting student achievement. In particular, the government should implement plans announced in 2021 to recentralise property management responsibilities with the Ministry of Education.

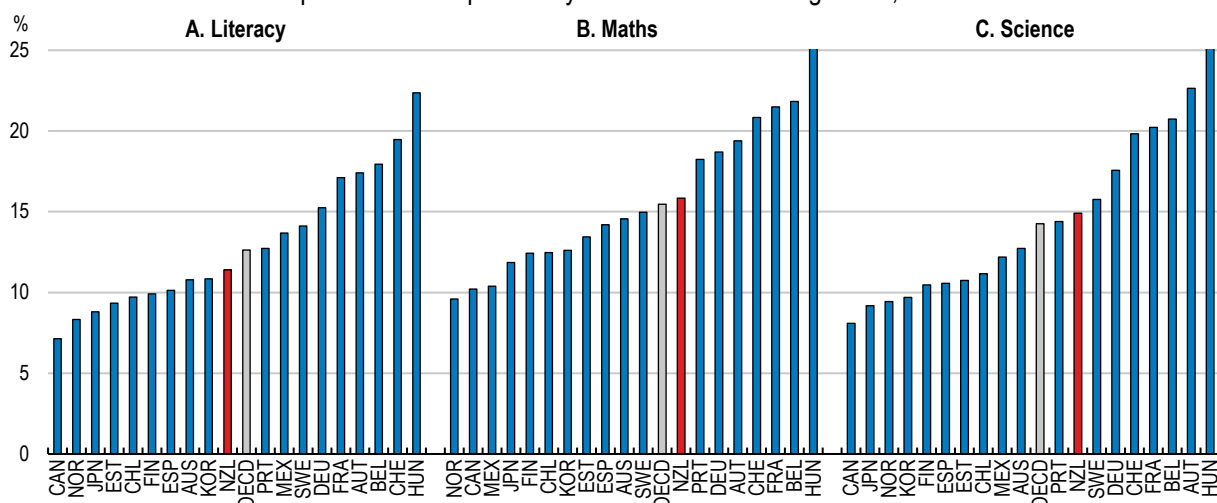
Lastly, training of and support to new school leaders is insufficient. In secondary education, formal training before taking up duties as a principal is below the OECD average, with about 21% of school leaders in secondary education having never received any instructional leadership training (OECD, 2019b, Figure 10). To avoid that high autonomy widens inequality across schools, school leaders need adequate levels of capacity, support and accountability. There needs to be greater support to principals in financial management and other key responsibilities of the post. A welcome development was the introduction in 2023 of the Leadership Advisory Programme, a Ministry of Education service provided by regionally based leadership advisors, to assist principals with implementing national educational policies and improving outcomes for children. Support should also include a training requirement for new principals together with a grant they can use to train with a training provider of their choice. The soon to be introduced legislative requirement to set eligibility criteria for appointment as a principal is a welcome initiative that should help build greater consistency in the quality of those appointments. It should also help in better signalling to aspiring and new principals the minimum skills and knowledge they will need to successfully carry out the roles and therefore the type of training they will need.

### Socio-economic status is an important factor driving learning outcomes

OECD data suggest the influence of socio-economic background on student achievement in reading, maths and science is close to the OECD average (Figure 11). This partly reflects policy actions such as equity-based funding helping to offset socio-economic disadvantages. However, New Zealand should be striving to be amongst the best OECD countries such as Canada and Norway by reducing the influence of socio-economic background on achievement considerably more. This would go a long way to reducing across and within school variation in student performance.

**Figure 11. The influence of socio-economic background on achievement is close to average**

Share of variance in student performance explained by socio-economic background<sup>1</sup>, 2022



1. PISA index of economic, social and cultural status.  
Source: OECD, PISA 2022 database.

International research shows that along with teacher quality, the most important determinant of learning outcomes is what a child brings to school with them, their abilities and attitudes and their family and community background (OECD, 2005). Indeed, recent research using individual student record data in New Zealand shows that disparities in student achievement outcomes in schools across deciles disappear once the effect of family background, particularly differences in parental education, are taken account of (Hernandez, 2019). The rural-urban reading divide is also eliminated once socioeconomic status is accounted for (OECD, 2022b). It also helps to explain high variation within school performance because of the relatively high socio-economic mix in schools in New Zealand.

Socio-economic factors are not easy to influence through policy especially in the short run. Hence, the main immediate policy challenge for reducing inequality in student achievement is how to offset the disadvantages created by low socio-economic background, while also pushing overall achievement higher. International experience suggests that education systems can lift both equity and overall achievement through improving early childhood education, raising teacher quality, tackling educational failure, and better targeting of funding to children's needs (OECD, 2022b). More specifically, in New Zealand it requires working on several fronts: further increasing participation in early childhood education; further improvements in targeting of equity funding informed by a revised national data collection and reporting framework (discussed above); continuing New Zealand's remarkable efforts to address cultural needs; tackling bullying, which contributes to lower school attendance and thereby educational failure and improving remedial learning support.

### ***Targeting public education funding better to improve achievement and equity***

There is no guarantee that simply spending more in aggregate on education would make a meaningful difference to achievement and equity in New Zealand. Public spending on primary and secondary education in New Zealand of 3.1% of GDP is just below the 3.2% OECD average. The relationship between total spending per child and achievement appears to be non-linear. At lower levels of spending, it is positive but above a spending threshold of around USD 50 000 of cumulative spending per child aged between 6 and 16 the relationship appears to be weak (Smidova, 2019) and New Zealand's spending is already above this threshold (Figure 12).

Corroborating that overall resourcing appears to be adequate by international standards, overall student teacher ratios are lower than the OECD average. In New Zealand, in full-time equivalent terms, there are 12 children per staff member in general upper secondary programmes, lower than the OECD average of 14 (OECD, 2023b).

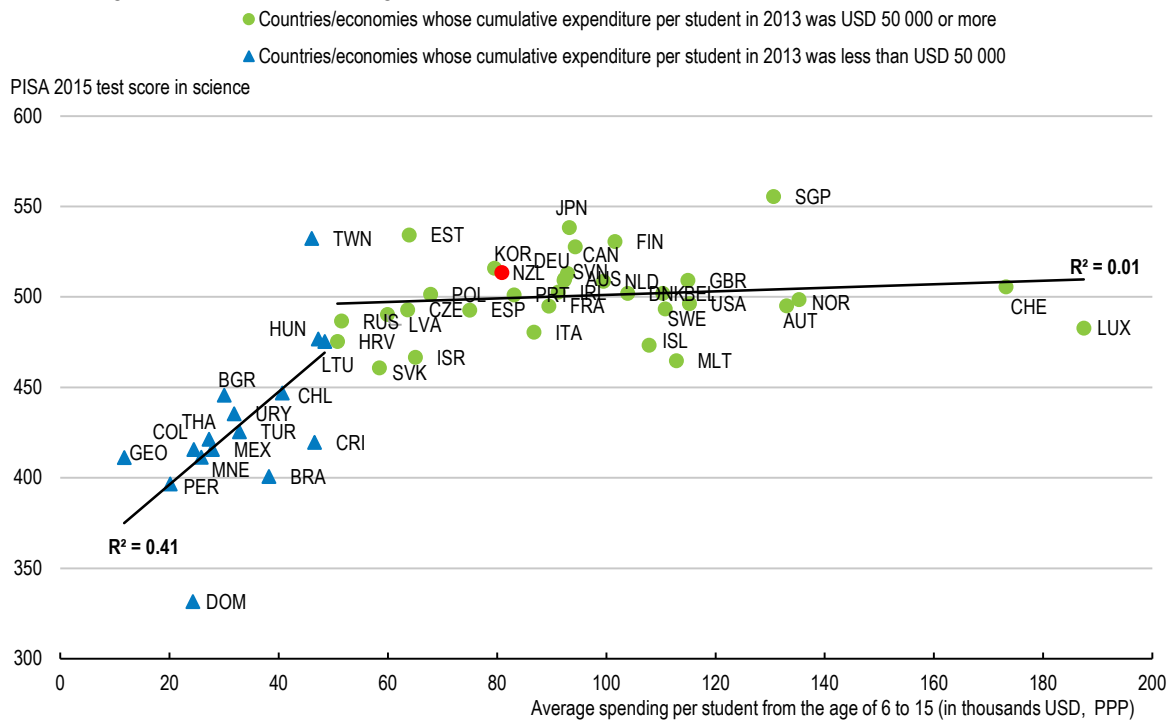
However, education spending appears to be skewed more towards secondary and tertiary levels, where per student public spending were 86% and 108% respectively of the OECD average in 2020. By contrast primary and lower secondary education were only 78% and 79% (OECD, 2023b).

Strategies used to allocate and match resources to learner needs are at least as important as overall school funding levels (OECD, 2017c). There should be greater prioritisation of resources on raising participation in early childhood education and raising teacher quality (discussed above), which international experience suggests have strong potential to lift the achievement of all children and particularly those from lower socio-economic backgrounds. There should also be a priority on selected programmes such as more specialist subject advisors that address problems at the primary level, where achievement appears to be declining the most and where spending per student is relatively low. Despite improvements, there is also an opportunity for more regular review and streamlining of programmes and funding allocations to improve equity.



**Figure 12. Increasing aggregate spending is not guaranteed to lift results**

Total spending per pupil between the ages of 6 and 15 and PISA science performance



Note: Only countries and economies with available data are shown. A significant relationship ( $p < 0.10$ ) is shown by the line.

Source: OECD (2015), Education at a Glance.

### *Lifting participation in high quality early childhood education and care would pay large returns*

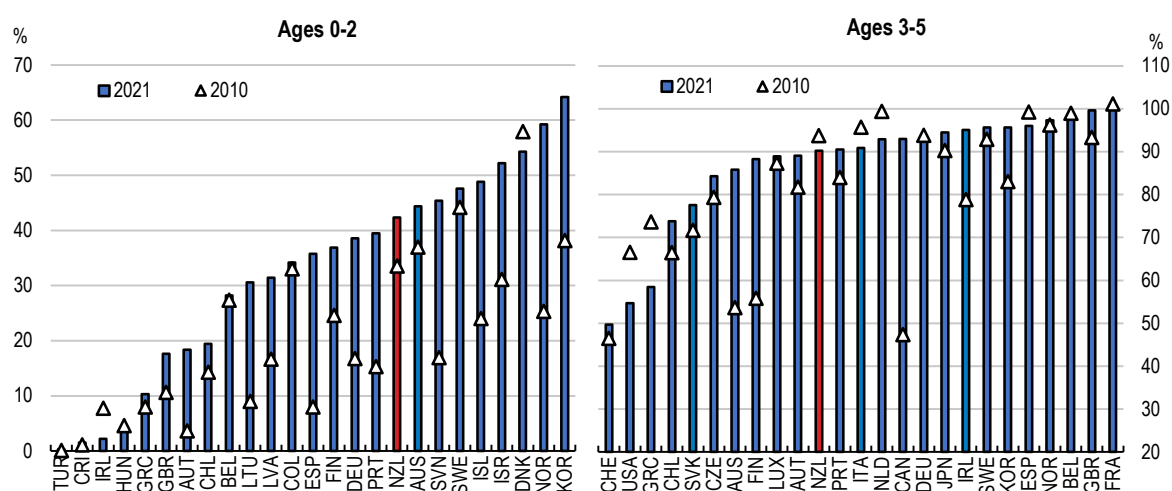
Provided the system is of high quality, lifting participation in early childhood education is one of the most effective ways to offset the negative impact of unfavourable backgrounds on achievement (OECD, 2017c; Smidova, 2019). Well-trained early childhood education and care (ECEC) teachers can and do expose children from poorer households to richer oral conversations and vocabulary, books, music and many other activities that they may almost never experience before they get to school. How long-lasting these effects is a function of the quality of ECEC as well as what is taught: to avoid fading out, ECEC needs to boost skills that are foundational for later success, not developed in the absence of ECEC. It is statistically challenging to determine how long-lasting the effects of ECEC are. However, a wide review of the empirical literature consistently shows that for universal programmes (open for all, but where children from disadvantaged families are typically prioritised) for older preschoolers from disadvantaged families the benefits of ECEC persist into adulthood (Duncan et al., 2023). The importance of ECEC is also revealed by strong path dependency in education. An analysis comparing the PISA and PIACC results of the same cohort in Sweden showed that adults rarely make up education ground lost as a child (OECD, 2023h).

Participation in ECEC from age 3-5 is high overall in New Zealand (Figure 13). However, even though 4% of enrolments accounted for by kōhanga reo (Māori medium pre-school) are not included in the data, participation is lower for children living in lower socio-economic areas. Only 60% and 67% of 3- and 4-year-old children from lower socio-economic backgrounds participated in ECEC for 10 or more hours per week, compared to around 73% and 81% for children from higher socio-economic backgrounds. Public spending on ECEC from age 0 to 5 is 90% of the OECD average and only 13% of the OECD average from aged 0 to 2 (OECD, 2023e). Boosting ECEC participation especially of lower socio-economic groups

should be a priority. However, although there is limited data available, there are indications of quality and cost issues calling for first carrying out an investigation into these issues in the ECEC system. Parent payments for childcare as a percentage of income are the highest in the OECD (OECD, 2024a) and there may be quality problems, which warrants further investigation. Around one quarter of 3000 surveyed ECEC teachers would not send their own child to the facility they work for and 45% said staffing ratios are sometimes breached (OECE, 2023). Also, ERO found that 20% of the 165 ECEC services they visited were not complying with one or more regulatory standards (ERO, 2022). International experience suggests an additional constraint on expansion of ECEC is the availability of suitably qualified staff (OECD, 2020e).

**Figure 13. Participation in early childhood education has room to increase**

Enrolment rate, %



Note: The first and latest data might differ slightly from 2010 and 2021. For the age group of 0 to 2, Belgium and Greece, 2019 and Portugal 2018. First year for the age group of 0 to 2, Costa Rica, Greece, Israel, and United Kingdom, 2013, Turkey, 2014, Colombia and Hungary, 2015, Belgium and Ireland, 2017.

Source: Calculations based on OECD Education at a Glance.

There should be a review of the ECEC system to identify the reasons for relatively low participation (costs, lack of awareness of some communities of the benefits of ECEC), assess the quality of the ECEC system and identify reasons for quality problems. The challenges seem high and fixing problems will likely take significant time. In the meantime, subject to fiscal constraints, an alternative for raising participation in formal schooling could be for the government to consider extending in length year 0 of primary school, on a pilot basis. Year 0 in New Zealand is a partial year, the length of which depends on the date of the child's 5th birthday, which is when they allowed to go to school and when parents usually choose to send children to school (although school is not compulsory until 6). One option to extend year 0 would be to allow children to enter year 0 from the beginning of the school year (school years run from late-January to mid-December in New Zealand) in which they turn 5. However, international experience and research suggests that if the starting school age is lowered, care will need to be taken to ensure there is a smooth transition between ECEC and primary education. The year 0 should involve pedagogical approaches and goals that are appropriate for this age group. It should in particular avoid the risk of "study intense learning" where a play-based approach is lost, which would be detrimental to children's wellbeing, and a too strong focus is put on "early basic academic skills". Finland is experimenting with lowering the school entry age to improve equity with significant effort going into designing a smooth transition.

### Continuously improving equity funding formulas

Although equity funding made up less than 4% of total school resourcing in 2023, it can represent a substantial share of discretionary expenditure available to a school board and so have an outsized influence on how a school is run. The Ministry of Education’s funding allocation formula already provides more resources to schools with children from lower socioeconomic backgrounds. Indeed, student-teacher ratios do increase with the socioeconomic status of both primary and secondary schools (Table 2). The allocation of funding to offset disadvantage has been further improved by the creation of an Equity Index developed by the Ministry of Education to replace from 2023 the decile system introduced in 1995. An important improvement is that this index attempts to measure the socio-economic background and barriers of the children attending the school, rather than the average socio-economic status of people living in the area where the school is located. Another advantage of the Equity Index is that funding declines smoothly avoiding “funding cliffs”, where schools could see substantial changes in equity funding when moving between deciles.

**Table 2. Student to teacher ratios vary considerably by region**

Contributing primary (years 0 to 6) student to teacher ratio, difference to New Zealand average

	Decile 01	Decile 02	Decile 03	Decile 04	Decile 05	Decile 06	Decile 07	Decile 08	Decile 09	Decile 10	Region average level	Region average NZ
Auckland	1.5	1.3	0.6	0.1	0.3	-0.1	-0.1	0.3	0.3	0.3	16.2	0.5
Bay of Plenty/Wairariki	-0.1	0.6	-0.4	0.2	0.7	1.0	1.3	1.3	0.8		16.1	0.4
Canterbury/Chatham Islands	0.6	1.1	0.7	-0.7	0.6	-1.1	-1.4	0.1	-0.7	-1.0	15.5	-0.2
Hawke's Bay/Tairāwhiti	-2.1	0.4	0.9	0.2	0.5	0.4	0.4	0.3	1.5	2.1	15.2	-0.5
Nelson/Marlborough/West Coast		0.2	-1.2	1.7	-3.2	0.1	0.0	1.0	-0.2	-3.9	15.4	-0.3
Otago/Southland	0.9	-0.8	-1.9	-1.5	-0.8	-1.2	-1.2	-0.1	-0.8	-0.5	15.1	-0.6
Tai Tokerau (Northland)	-1.4	-1.2	0.6	0.7	1.3	0.3	0.4	-1.0			15.0	-0.7
Taranaki/Whanganui/Manawatū	-0.3	-1.6	0.5	-0.2	-0.5	1.8	0.5	1.2	0.1	-0.1	15.5	-0.2
Waikato	1.2	-1.4	1.9	0.1	0.1	0.4	1.0	-3.3	-1.0	0.9	15.9	0.2
Wellington	0.0	-0.6	-2.6	0.0	0.5	1.0	0.2	-1.9	0.0	0.0	15.5	-0.2
Decile average Level	14.7	14.7	14.8	15.6	15.6	15.9	15.8	16.4	16.5	16.5	15.7	0.0
Decile average New Zealand	-0.9	-1.0	-0.9	-0.1	0.0	0.2	0.1	0.7	0.8	0.9		

Note: Teachers measured in full-time equivalents. The New Zealand national average is 15.7. Green denotes a ratio of 1 or more below the decile average, and yellow a ratio of 1 or more above the decile average.

Source: Ministry of Education and OECD calculations.

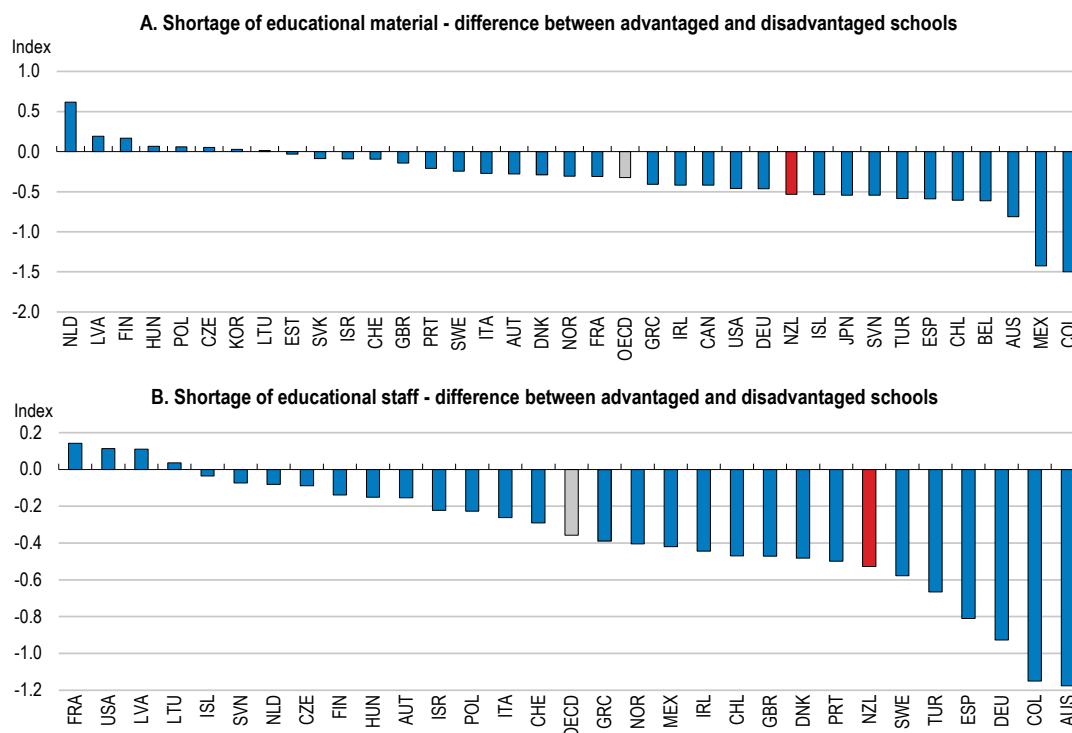
Nevertheless, there appears to be room for further improvements. There seems to be too many small equity-based programmes, forcing schools to make multiple applications for funds to deal with for example behaviour management issues. By international comparison disadvantaged schools in New Zealand still have a high perceived shortage of materials and especially teachers than advantaged schools (Figure 14). This warrants an investigation into whether the Ministry of Education’s extra funding formula provides enough funding to compensate the extra difficulties that all disadvantaged schools face. The revised national data collection and reporting framework on children’s achievements by school discussed above would assist this process and allow a more precise targeting of resources to address underachievement.

There is consensus in the research literature that small classes have a strong positive effect on the learning of children in the earlier years of education and from disadvantaged socio-economic backgrounds (OECD, 2017c). However, the effect of class size reduction is undermined if teachers are not well prepared to work

with more demanding students (OECD, 2007). This makes it essential to accompany smaller classes at school with ITE and professional development activities that prepare teachers well as discussed above.

**Figure 14. Perceived shortages of resources in disadvantaged schools are high**

2022



Note: Negative values indicate higher shortages in schools with low socio-economic status. As reported by school principals.  
 Source: OECD, PISA 2022 Database.

Student-to-teacher ratios provide is one diagnostic for identifying where there may be a resourcing issue but needs to be carefully interpreted. An analysis of student-to-teacher ratios in 2022 suggests the problem of insufficient teachers runs across deciles but is more prevalent in some regions than others. It seems to include not only low socioeconomic status schools but also mid-level ones at both primary and secondary levels (Table 2). Auckland has the highest student-to-teacher ratios in New Zealand in schools in nearly all deciles at both primary and secondary levels. For example, decile 1 (the lowest) primary schools in Auckland have substantially higher student-to-teacher ratios than schools in this decile elsewhere in New Zealand, and closer to ratios of high decile schools of decile 8 and above. These include schools in South Auckland with high Māori and Pasifika populations.

At the secondary level, several regions have substantially higher student-teacher ratios in mid-level schools (deciles 4 to 6) than their decile elsewhere in New Zealand. Rural schools also have very high perceived teacher shortages by international comparison. This complex pattern suggests there may be several reasons behind higher ratios. This includes that while the Ministry of Education calculates a total staffing entitlement per school to achieve target student-to-teacher ratios, school boards determine the actual ratios and timetabling of classes, which may contribute to some variety. Recruitment difficulties may also be partly responsible. The Ministry of Education is working to update its programme for supporting schools with recruitment difficulties. The new programme, Priority Staffing School, aims to identify schools that have the most difficulty in recruiting and retaining teachers and to provide them with more resources to counter this disadvantage. The Ministry, in concert with ERO, should monitor school-by-school whether

this enhanced programme is sufficient for all schools identified as having higher student-to-teacher ratios than peers in the same decile or locality (rural, urban etc.). Given that it is school boards that decide actual student-to-teacher ratios, this will need to be done in close consultation with the schools concerned to understand their needs and preferences. Resolving teacher shortage issues may require not only more funding for teacher salaries to offset recruitment disadvantages, but also more support to create generally more attractive working conditions for teachers in these schools, including better ITE and new teacher induction. More effort to spread best practices between principals and leadership training for principals, as discussed above, would contribute to a better working environment for teachers by improving mentoring.

### ***New Zealand has increased cultural awareness markedly but there is more to do***

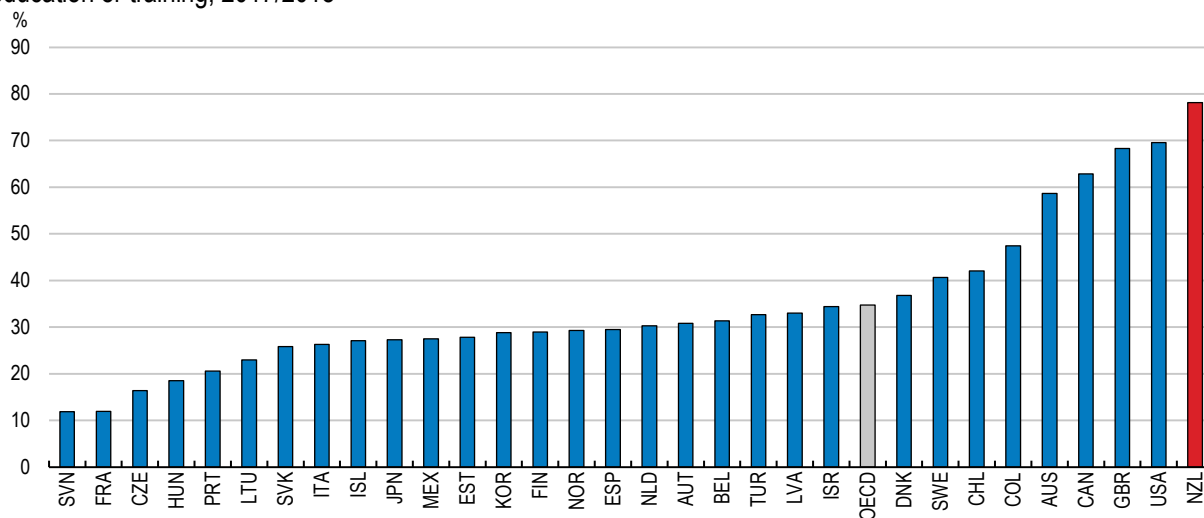
An important aspect of improving equity in education outcomes is improving the performance of Māori children, who as a group under-perform the New Zealand average on every indicator from attendance to school leaving qualifications. Indeed, Māori children accounted for 25% of primary and secondary enrolments in 2022 so improving their performance and wellbeing is key to ensuring that the education system delivers the opportunity for all children to reach their potential. Teachers can have lower expectations of Māori children, and this is likely to lead to them being given more restricted learning opportunities (Alansari et al., 2020). This differentiated treatment may help explain why Māori children feel a lower motivation to learn, greater test anxiety and lower levels of parental support than non-Māori, although their motivation to achieve remains above the OECD average (OECD, 2017b). Along with coming from lower socio-economic backgrounds, these factors have likely contributed to worse outcomes for Māori children than the national average, including leaving school with fewer qualifications, lower attendance rates and higher expulsion rates.

Building teacher cultural awareness and bringing Māori knowledge and language into the curriculum and other aspects of schooling can serve to reduce discrimination and improve the performance and wellbeing of Māori children. This is especially important as 90% of Māori children are enrolled in the English-medium pathway, where most teachers are non-Māori and command of Māori knowledge and language, although growing, is still work in progress. By giving importance to their identity and ancestral history, this provides them and teachers a better understanding of their place in New Zealand and the world. It can also help make children feel valued, with a strong sense of self-esteem and belonging at their school. It can further assist teachers understand who and where their children come from, and therefore build a stronger relationship of trust between teachers and children (OECD, 2023a).

Efforts to increase the understanding and influence of Māori culture in New Zealand and revitalise the Māori language have been intensified. A foundation step was the Māori Language Act 1987 that gave Māori official language status in New Zealand. In education, like in many policy domains, a feature of this effort is the central pillar status the Treaty of Waitangi and giving effect to its principles are accorded in designing policy. Indeed, consistency or implementation of these principles is often the first objective of any recent proposed policy reform. Another manifestation is the widespread use of code-switching in government education policy statements, documents and communications, i.e., the use of both English and Māori words in the same text: for example, the draft curriculum Te Mātaiaho states “Te Mātaiaho is designed to give effect to Te Tiriti o Waitangi and to be inclusive of all ākonga. The curriculum is framed within a whakapapa that connects all its components” (Ministry of Education, 2023c). Code-switching in official documents raises cultural and language awareness. But this practice is unusual internationally, even in countries with two or more official languages such as Canada. New Zealand is also the OECD leader in preparing teachers for teaching in a multicultural and multilingual environment in the OECD (Figure 15).

**Figure 15. New Zealand is the OECD leader in preparing teachers for a multicultural environment**

Percentage of teachers for whom “teaching in a multicultural or multilingual setting” was included in their formal education or training, 2017/2018



Note: CAN refers to the province of Alberta and GBR to England.

Source: OECD, TALIS 2018 Database.

Further action is taking place to make all schools places where Māori children are not discriminated against and feel they belong to. One of the primary objectives of the Ministry of Education’s English medium-curriculum refresh is that a school board’s plans, policies, and local curriculum reflect local tikanga Māori (customary practices), mātauranga Māori (Māori traditional knowledge), and te ao Māori (Māori world view) (Ministry of Education, 2023c). However, teachers, feel they do not have the knowledge and support to implement these requirements. Furthermore, teachers of Māori ethnicity already feel overburdened in terms of advising school leadership on Māori culture, knowledge, and language issues. To help this policy objective succeed, the Ministry of Education needs to complement these objectives with providing national and regional support for implementation at the local level, including school board and teacher training, and providing expert advice to spread best practices.

One of the main initiatives in bringing Māori customs, language and knowledge into the education sector was the development of a Māori medium education pathway, where the children are taught more than half of the time in the Māori language. The first Māori medium pre-school (kōhanga reo) and school (kura Kaupapa Māori) were opened in the 1980s and the pathway has expanded significantly but is still developing. Approximately 10% of all Māori in schools are enrolled in this pathway.

Comparing results in the Kaupapa Māori and Māori and English medium pathways is complicated because the commitment of parents to education may be higher amongst parents of children sent to Kaupapa Māori and Māori medium schools as evidenced by a willingness to travel longer distances and because it is often a deliberate choice by a wider family. With this caveat of selection bias, Māori children in Māori-medium education are experiencing better outcomes than Māori in English medium education in many domains (Ministry of Education, 2020). This includes a higher share of children staying in school until age 17 and above, of which only 6.8% left without at least NCEA level 1, compared to 60.8% of Māori school leavers below 17 that left without NCEA level 1. In 2020, 79.9% of Māori in Māori medium education left with an NCEA level 2 or above qualification, only slightly below the national average of 80.8%.

Māori-medium education faces several challenges. There are few assessments tools for years 0-10, i.e., prior to NCEA. There are tools for assessing mathematics and reading but no tools for assessing writing



or oral competency in Māori and other competencies of children as they transition from one level to the next to see where they are strong and weak or enter the Māori-medium pathway. Transitions are easier than in the English system because schools are more often composite (i.e., years 0-13) and teachers know and are following children throughout their schooling. Developing new assessment tools alongside the refreshed Māori-medium curriculum, and especially diagnostic type assessment would better inform teachers about the needs of all children in the pathway. It would also help teachers speed up the integration of children transitioning late into the pathway, who can struggle to catch up.

The Māori medium curriculum, Te Marautanga o Aotearoa, redesign will be the third iteration of the Māori medium. It aims to be more strongly built on a foundation of the Māori world view, history and culture than its predecessors, while preparing children for a globally connected world. The Māori curriculum refresh faces the same challenge of increasing the detail of what should be taught as the English one.

Another important challenge is to build up the Māori medium pathway and Māori language learning at the secondary level. The share of Māori enrolled in Māori medium schooling falls dramatically from primary to secondary level. The share of Māori children learning Māori in some way also falls from nearly 100% at primary school to around 35% in secondary school (Ministry of Education, 2020). There is a drop in demand by parents but also the supply of secondary teachers with sufficient Māori to teach their speciality in Māori is small. The Ministry of Education uses innovative techniques to mitigate this, for example providing some subjects at secondary level via online courses.

However, ultimately increasing secondary level participation is constrained by supply of teachers. This will require increasing Māori ITE completions at the secondary level, which are only around one fifth of primary school ones. The Ministry of Education has pilot ITE programmes where students are fully funded including course and living costs with strong mentoring support, a mix of practical and theory components and a guaranteed teaching post on successful completion, along with some bonding obligations. Two of the three pilots are now finished and Te Ahikāroa – delivered by the University of Waikato to eight trainees (originally intended to be 40) will finish at the end of 2024.

These programmes are costly, so expanding them will likely require some scaling back of expenditure per candidate, although for the moment candidate supply seems to be more the binding constraint as places in the pilot were far from fully filled. Given large public support to students, an obligation for students to work for some time in return for the support they received during their studies seems fair. Such an obligation seems to be also necessary as professionals with a higher education degree and who are fluent in Māori language are in short supply and have attractive alternatives in the private and public sectors.

### ***Addressing the needs of every child***

More young people would choose scientific and technological careers if there was more focus on helping especially girls overcome their anxiety about mathematics and science. Even among top performers in mathematics and science as in most other OECD-countries, career expectations differ considerably between girls and boys, with boys looking for a career in science and engineering to a larger extent, whereas girls tend to turn to health-related professions. Narrowing these gender gaps requires employers, parents and teachers to become more aware of their own conscious and unconscious bias so they give boys and girls equal chances for success at school and later (Encinas and Cherian, 2023). Training teachers to recognise and address any bias they have about girls and boys can help. It is also important to improve the participation of girls in more mathematical and technological activities, raise the awareness about the pay consequences of different choices of fields of study. School visits and talks by women leaders in mathematics, science and technology and men in arts and humanities can also play an important role in showing boys and girls and their teachers that men and women can succeed in any role in the labour market.

### *Tackling parent attitudes, bullying and discipline is key to increasing attendance rates*

Parent attitudes play a large role in the attendance of their children and many are ambivalent about their children attending school every day (ERO, 2023). The government and the Ministry of Education together with school and community leaders should run a campaign with parents to turn these negative attitudes around. In a welcome move the government has announced as part of its Truancy Action Plan that it will roll out a communications campaign to improve awareness of the importance of attending school from the second quarter of 2024 onwards. The Action Plan also appropriately is focusing on improving data to allow a better analysis of the drivers of non-attendance and developed. While there are likely multiple drivers and solutions depending on the degree of truancy, as discussed above, international evidence suggests that bullying contributes to non-attendance and the campaign should be accompanied by demonstrating to parents that action is also being taken to improve the school environment for their children both culturally and from a security perspective.

In this regard, to counteract bullying, the Ministry of Education, along with 16 other agencies, has set up *Bullying-free NZ*, a hub which disseminates evidence-based bullying prevention policies. The *Bullying-free NZ* website provides schools with free guidance on how to design and implement anti-bullying measures, including complete frameworks and roadmaps. The Ministry of Education has also tasked the New Zealand Council for Educational Research with managing *Wellbeing@School*, a website which allows schools to collect data on bullying, and then develop and self-review their anti-bullying action plans.

PISA data suggests bullying can be reduced by creating a supportive environment inside and outside the classroom. The share of frequently bullied children is higher in schools with a poor disciplinary climate and where a high share of children feel they are disciplined more often than others and are ridiculed by their teachers. This suggests teachers can help limit bullying by communicating clearly to students that they will not tolerate any form of disrespectful behaviour, and by acting as role models in the classroom. Teachers, school leaders and parents should work together to improve the school climate including whole-of-school prevention strategies that make everyone responsible for confronting bullies and supporting victims (OECD, 2017a). A review and analysis of 100 studies evaluating the effectiveness of school-based anti-bullying programmes across several countries found that such programmes were effective in reducing both school-bullying perpetration (by an estimated 19-20%) and school-bullying victimisation (by an estimated 15-16%) (OECD, 2023i). However, for programmes to be effective teachers and school leaders need to be equipped to both recognise bullying and to actively create an environment where it is less likely to occur (OECD, 2023a), emphasizing the importance of teacher and school leader professional development in this area.

Recent successful whole-of-school anti-bullying programmes include Free of Bullying used in Denmark and KiVa developed in Finland. KiVa is used across many countries, including, since 2014, in more than 50 New Zealand schools. Using interactive computer games for students and teacher training, among other techniques, KiVa addresses bullying at a group level, aiming to turn bystanders into defenders that take the side of the bullying victim. Early indicators point to KiVa being an effective bullying prevention programme in other countries (Huitsing et al., 2020) and in New Zealand (Green et al., 2020). More research is needed into policies to combat cyberbullying, but there is evidence that programmes to combat traditional bullying including KiVA are effective against cyberbullying (Gottschalk, 2022). The Ministry of Education should expand whole-of-school anti-bullying programmes to more schools together with a New Zealand based evaluation.

### *Ability grouping within classes at schools is extensive and may run counter to equity objectives*

In New Zealand, formal programme tracking into different education pathways such as technical and academic focused schools does not exist. This tends to promote equity in education (Hanushek and

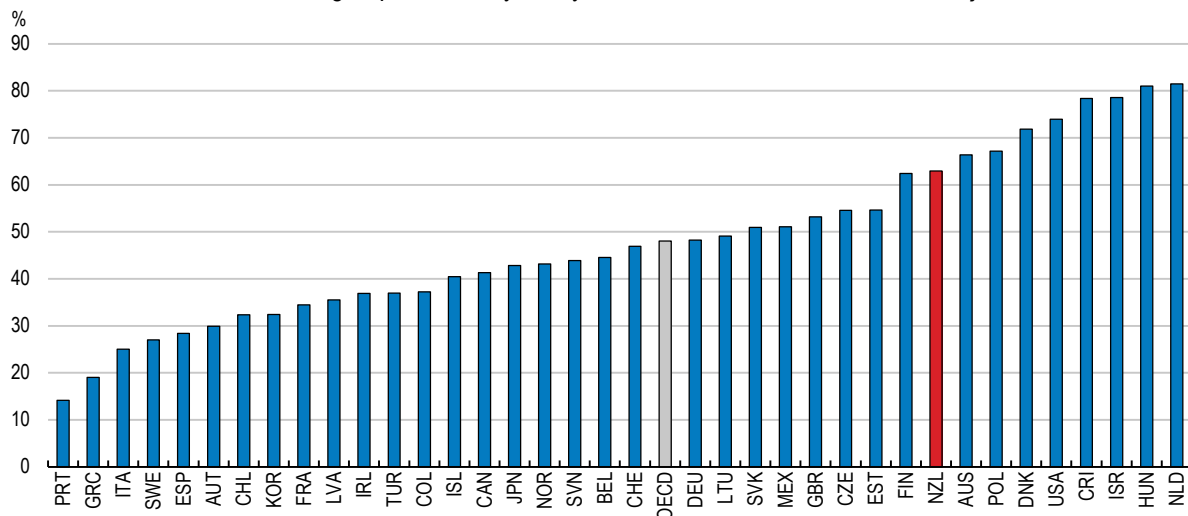


Woessmann, 2006; OECD, 2012a) by subjecting all children to the same learning environments, providing similar learning expectations and putting them in groups with the same ability (OECD, 2023a). Indeed, OECD analysis suggests that the age of first tracking explains close to half of the differences in reading performance in PISA across OECD countries (OECD, 2020a). However, because NCEA is appropriately a wide programme with both more academic and vocational options, children can find themselves effectively tracked into different pathways but in the absence of data it is difficult to understand what its effects are. More data collection and research is warranted in this area. In particular, more transparency about how those decisions are made at classroom and school level, for example through a national and transparent policy, is needed (Perico Santos, 2023).


In addition, ability grouping in school, which can also impact equity, is high in New Zealand. Ability grouping involves placing students into different classrooms or in small instructional groups in a class based on the students' initial achievement or skill levels (OECD, 2023d), (Figure 16). It can reinforce socio-economic differences within schools by creating lower teacher expectations for those children in lower ability groups, who in turn internalise these expectations (OECD, 2023a). This particularly affects Māori children who are over-represented in the low-ability groups. Ability grouping is often justified on the basis that it lifts overall performance. However, OECD analysis of PISA results suggests that across countries there is only a weak positive correlation between streaming in some subjects and mean performance in reading (OECD, 2020a). A large-scale study in the United Kingdom found no evidence that ability grouping lifted student achievement in mathematics, science and reading (Ierson et al., 2005).

**Figure 16. The use of ability grouping is prevalent in New Zealand**

Share of children in schools that group children by ability within their class for some or all subjects



Source: OECD, PISA 2022 Database.

StatLink  <https://stat.link/b05oki>

There are calls on equity grounds and especially for Māori children to end streaming in New Zealand by 2030 supported by the Ministry of Education. Many teachers agree but some voice concerns about the extra challenges of teaching in mixed ability groups, especially where class sizes are large. Given that only anecdotal evidence for the effects of de-streaming in New Zealand has been provided, and some opposition remains, de-streaming should be introduced gradually, first with more pilot trials and studied using a rigorous large scale, data-based analysis.

Gradually implementing de-streaming with extra support to teachers to teach to mixed ability groups will help ensure this reform is successful and build trust. Simultaneously actions can be taken to mitigate the possible negative equity effects of streaming including: making grouping as subject-specific as possible as children's attainment differs across subjects; regularly re-testing children; and moving them between ability groups where appropriate; and ensuring that all children have access to a rich curriculum, rather than reducing content and lowering standards for children in lower-ability group levels (OECD, 2023a). It is especially important to avoid cultural and other biases and schools should perhaps consider some anonymised checking of their ability grouping decisions to help avoid this.

### *Assisting children with disabilities and extra learning needs*

There has been increasing recognition in New Zealand of the importance for equity in ensuring that all children with disabilities and extra learning needs can achieve their potential. The government spends approximately 0.3% of GDP on disabilities and extra learning needs education, making it one of the key programmes for improving equity in education. There is no universal agreement on what disabilities and extra learning needs encompasses. It can include learning disabilities (e.g., dyslexia) independent of intelligence that affects a child's ability to use language, physical impairments, mental health conditions (e.g., Attention Deficit/ Hyperactivity Disorder (ADHD)) and giftedness: children with higher-than-expected intellectual abilities given their age (OECD, 2023i). The Ministry of Education estimates that around 20% of children need extra learning support related to disability, learning difficulties, disadvantage, physical or mental health or behaviour issues. Around 14% of pre-schoolers may have neurodevelopmental disorders (NDD) although such estimates are highly uncertain (Saraf and Marks, 2019).

Important policy strides have been made towards addressing these needs in a more inclusive and coordinated way, starting from 1989 with an increase in dedicated funding for children with disabilities and extra learning needs towards a broader and more coordinated and inclusive range of support services (Ministry of Education, 2021). The Learning Support Delivery Model (LSDM) introduced in 2016 brings together learning support services in a community of schools that work together with Learning Support Coordinators and Ministry of Education facilitators (Ministry of Education, 2021). The LSDM seeks to identify needs across their school community and how to address them. This collaborative approach is important because of the very diverse range of these needs making it near impossible for any one person or school to be expert in addressing them all.

The Ministry of Education has developed a detailed plan (2019-25) based on widespread consultation to further improve support to disabled children and children with additional learning needs. One of the main priorities of the plan is to improve LSDMs through the employment of just over 600 learning support coordinators (often experienced teachers) to coordinate support of schools, teachers and parents for those children with additional needs for 1052 schools in 124 clusters. A recent qualitative evaluation found strong support for these roles from schools, teachers and parents and that coordinators had assisted with child transition between schools (Andrews et al., 2022). However, reflecting a lack of tools to foster collaboration, coordinators had struggled to influence learning support outside their own school.

The Ministry of Education plans to further reform the delivery but more needs to be known about disabilities and extra learning needs to do this most effectively. As not all schools have a coordinator, fostering school clusters is key to achieving better equity across schools. Providing a national database and nomenclature of learning needs would facilitate collaboration and is a key requirement to help children with additional learning needs more. There is a widespread consensus across society that early identification of NDD and other learning difficulties is crucial to help these children more (Ministry of Education, 2019b). The Ministry of Education, together with the Ministry of Health, should implement the plan to systematically carry out early screening tests of pre-school children and at school entry to identify the children with different learning

needs.. A large share of learning support funding is provided through schools and families need to reapply when they move from school to school including moving from primary to intermediate to secondary schooling. Funding can be uncertain through these transitions as access to funding can be dependent on the quality of application and the school's ability to navigate the learning support system. It would be preferable that the funding follows the child to their new school (OECD, 2007). This would help ensure that the funding is available from when the child starts at a new school. Better measurement of the national scope of the problem, which is unknown, as well as a national database on individual needs is also key to knowing how much funding is required to tackle it and where to target it.

However, beyond improving measurement of needs, it may also be worth considering piloting a mix of funding models to address disabilities as they each have advantages. The most common internationally is an input-based one based on ensuring demand for extra learning needs support is met. This can help ensure resources go to the children that need them, but it also relies on being able to label and diagnose children and involves waiting time before they will be helped. By contrast, the throughput model is a supply-driven model that emphasises specific services provided instead of needs to be covered and is used in Denmark, Ireland, Greece and Sweden (OECD, 2023a). This model does not directly require labelling students with disabilities and extra education needs reducing the costs of measurement and also risks of over-identification and stigmatisation induced by labelling. However, not directly funding in tandem with demand can mean that schools may not always have sufficient financing to cover the needs of individual children with extra education needs. Contrary to input and throughput approaches, the output model, which is the least common internationally, links results of the education system to the funding and directly promotes a set of valuable outcomes. This, however, entails the risk of not channelling resources where the need is higher as well-performing schools may receive most of the funding that lower-performing schools would need more. However, the school clustering and collaborative approach being used in New Zealand may help offset that problem.

Existing interventions to help children with additional learning needs can also be improved. The main remedial learning programme that is funded by the Ministry of Education for children falling behind in literacy, Reading Recovery, has been in place since the 1980s. There is evidence that Reading Recovery does help some children that are falling behind to improve their reading performance (Appleton-Dyer et al., 2019). However, it fails to improve learning outcomes for a significant minority (15-30%), and particularly children from Māori and Pasifika backgrounds (Chapman and Tunmer, 2018), and research finds that improvements are not permanent (ERO, 2018).

Teachers are also overly reliant on interventions such as Reading Recovery rather than taking immediate responsibility for having all students succeed in their classroom (ERO, 2018). In addition, programmes to deal with children that have not improved in Reading Recovery appear to be ineffective and there is inconsistency across the different levels of intervention (McNaughton, 2020). In a welcome move, the Ministry of Education is also now providing funding to support the Better Start Literacy Approach, a structured literacy approach, introduced by the University of Canterbury in 2020 that includes building letter-sound knowledge (phonics). All schools have also been provided with copies of the Ready to Read Phonics Plus books to support a structured approach to teaching reading. As Reading Recovery does not work for all, the Ministry of Education should continue to expand support to alternative interventions with different methods including structured literacy and phonics to teach reading. It is also important that teachers, via ITE and ongoing professional development improve their teaching practice and understanding of the technical aspects of teaching reading, and how children learn. Outside interventions have their place but it is ultimately in the classroom where the challenge to improve education achievement and equity lies.

### *The objectives and regulation of partnership schools need to be carefully designed*

The government plans to re-start partnership (publicly funded private schools). This can potentially play a role in further improving equity and excellence but it is important to carefully consider the current school landscape in New Zealand. The high autonomy of schools mean they can already tailor significantly their offer to local needs suggesting partnerships schools would not add much in this domain. Similarly designating these schools to take care of the learners whom the public system has not served well, risks stigmatising those learners and conveying the message that the public system is not able to address the needs of those learners with the greatest learning difficulties. By contrast, partnership schools may be able to contribute to spreading best practices and improving school board governance. However careful thought needs to be given to who the government is targeting to do this and to tailor the regulatory framework to this. For example, if the aim for school boards from successful schools (in terms of excellence and equity) to govern other schools, the government may want to require the successful board to show that it has generated success for children from similar backgrounds to those of children in the school it proposes to govern. Experience from different countries indicates that the impact on equity and educational quality of publicly funding private providers is influenced by the institutional arrangements surrounding them (OECD, 2017). It is important regulation prevents undesirable outcomes for equity such as greater segregation through allowing the school to select students based on academic achievement or reduced professionalism by allowing unregistered teachers.

## Findings and recommendations

FINDINGS	RECOMMENDATIONS [key ones in bold]
<b>Raising achievement and improving equity in a devolved education system</b>	
Education achievement assessed across domestic and international surveys has declined since 2000, with persistent wide inequalities in student performance and high levels of bullying. There is insufficient trust between the Ministry of Education on the one hand and boards, schools, principals, and teachers on the other hand required to obtain the buy-in to policy from schools needed to ensure system wide improvements.	The New Zealand education system should remain devolved. Implementation of education policy should be reformed by: <ul style="list-style-type: none"> <li>providing more central and regional support to help schools, school boards, principals and teachers to put policy into action;</li> <li>strengthening horizontal ties between actors to help better spread best practice.</li> </ul>
<b>Strengthening the institutional capacity to support schools, school boards, principals and teachers</b>	
The Ministry of Education does not appear yet to have the capacity, especially at the local level, to provide the support schools need to implement national policies. Lack of central guidance and support is unnecessarily increasing workloads and inducing stress and distrust of national reforms amongst principals and teachers.	<b>Continue to build further Ministry of Education capacity to support schools, and expand regional offices including reinstating specialist subject advisors, in priority for the primary and intermediate levels.</b>
<b>Ensuring a more knowledge-rich curriculum and getting the most out of assessment</b>	
The 2007 New Zealand national curriculum currently in place for years 1-13 for all subjects provides only high-level guidance. The high level of discretion at school level leads to high variability in what is taught. Teachers do not have enough materials or advice on how to implement the curriculum.	<b>Establish a more detailed national curriculum that specifies by subject the learning outcomes, competencies, core concepts and knowledge children should have acquired by years of education and provide high-quality assessment and teaching materials.</b>
New Zealand children report below OECD average exposure and understanding of both fundamental concepts and word-based problems in mathematics. A new curriculum is under development. The performance of New Zealand children in international tests is falling in science and proposed reforms to the curriculum were controversial.	Consult a wider range of mathematics and science teachers, subject associations and university faculty in engineering, mathematics and science on the new curriculums in mathematics and science and incorporate their expert advice in the new curriculums.
New Zealand has an increasingly culturally diverse population.	Broaden out the history curriculum to tell the stories of all New Zealanders.
Reforms have been sequenced incorrectly with NCEA assessment reforms taking place before curriculum reforms.	Revise NCEA standards to ensure they are fully in line with a revised more detailed curriculum.
The new NCEA level 1 qualification does not seem to have addressed the concerns that it is taking too much time away from teaching.	Keep refining level 1 to obtain greater participation from higher SES schools by ensuring it is a valued qualification for all schools.
More can be obtained from new NCEA literacy and numeracy co-requisites at little cost.	Convert the literacy and numeracy co-requisites to a progressive achievement grading, or offer the standards at different levels to promote continued participation at higher levels.

NCEA standards are too narrow, impose a large work burden on teachers and incentivise children to seek easier standards, because all standards are considered equal in terms of the credits. Dividing subjects into so many units risks that children miss out on building knowledge in key sub-topics, which is a barrier to mastery of overall competencies.	Fully implement the plan to have fewer and larger standards as well as rebalance assessment towards external assessments.
Measurement of individual child progress against common achievement standards would help with diagnosing where problems lie and allocating resources to solve them.	Introduce a revised national data collection and reporting framework that focuses on children's progress towards common achievement standards, with regular <u>confidential</u> reporting to the Ministry of Education.
<b>Spreading best practice and leveraging the education system's assets</b>	
The spreading of best practices is crucial to the performance of a highly devolved education system. However, there is not enough data or use of already available data to identify good practices.	Make more use of existing and new data to identify best practices at school level and spread them including by drawing more on research already available on the performance of schools as well as confidential data from a national standards reporting framework.
International comparison reveals expanding collaboration between actors at the local level is an important lever for spreading best practices. One of the ingredients of the success of collaborations is the use of a rigorous database performance assessment to identify higher-performing schools and pair them with lower performing schools.	Complement communities of Learning  Kāhui Ako school groupings with more horizontal and mixed performance groupings of primary and secondary schools.
There are many excellent schools and centres of innovation across the system led by highly motivated and talented academics, teachers, principals, school boards from regional subject associations to trusts. But there is insufficient diffusion of these practices and by international comparison accessibility to education research is perceived low.	Support horizontal spreading of best practices by setting up a government-funded education excellence fund to support best practice spreading projects, with resources allocated by an independent board.
Achievement of Māori children is higher in the Kaupapa Māori and Māori medium education pathway in part because of the high engagement of family and community with school.	<b>Spread best practice from the Kaupapa Māori and Māori medium pathway to the English medium pathway in building school-family linkages that support children's achievements and wellbeing.</b>
The Education Review Office (ERO) has a deep knowledge of learning outcome and processes that contribute to them.	To help spread best practice, ERO should continue its more frequent and intensive follow-up advice practices.
<b>Supporting teachers throughout their careers</b>	
A sizeable share of teachers in New Zealand do not feel fully prepared in core teaching areas (content of subjects, pedagogy, teaching cross-curricular skills). Primary teachers are insufficiently prepared to teach maths and science.	<b>Include more subject content and pedagogy in initial teacher education programmes, especially for mathematics and science. Incentivise this by changing teacher standards to require this.</b>
International experience shows that high-performing countries and schools have an initial education or induction period that includes a mandatory and extended period of in-class practice and a variety of opportunities for in-service professional development; and teacher-appraisal mechanisms with a strong focus on continuous improvement.	Monitor recent changes to extend the practical component of ITE via and further adjust as necessary. Better prepare new teachers by making at least the first year of teaching registration a more formal post-graduate education year in pilot schools, to better develop content knowledge and pedagogical capability. When the fiscal situation allows, make the programme system-wide.
There is no mechanism to ensure minimum standards for teacher appraisal processes in schools and no guarantee each teacher receives proper professional feedback.	Unify the two existing sets of standards (Teaching Council for teacher registration and teachers collective agreement for career steps).
A career pathway for teachers to stay in the classroom and be rewarded for their growing mastery of teaching seems to be missing.	Introduce career ladders divided into several tracks with a teaching track divided into several levels of seniority from classroom to master teacher.
<b>Easing the burden on school leadership</b>	
School board abilities vary and some struggle to meet the demands they face.	Consider making the School Trustees Association the facilitator of school governance learning communities that group together boards and principals.
Formal training before taking up duties as a principal is below the OECD average.	Introduce a formal training requirement for new principals together with a grant new principals can use to train with a training provider of their choice, as well as the formal assignment of experienced mentor/s.
<b>Closing equity gaps</b>	
By international comparison disadvantaged schools in New Zealand still have a high perceived shortage of materials and especially teachers. The problem of insufficient teachers for schools appears to run across deciles but is more prevalent in some regions than others. Recruitment and retention difficulties appear to play a role in this pattern.	Monitor the effectiveness of updated measures to provide extra support to schools identified as having recruitment difficulties. Carry out a review of individual schools with high student-to-teacher ratios and spell out further remedial measures as needed.
New Zealand is a leader in improving cultural awareness in education. However, lower teacher expectations of Māori children result in more restricted learning opportunities. Māori children often have a low sense of belonging at schools where learning does not reflect their culture.	Complement objectives to build teacher cultural awareness and bring Māori knowledge and language into the curriculum with national and regional support for implementation at local level, including school board and teacher training, and provide expert advice to spread best practices.
Ability grouping or streaming within classes, which can impact equity, is the highest in the OECD.	Introduce de-streaming gradually, first with more pilot trials accompanied by extra support to teachers to teach to mixed ability groups.

	Retain streaming in upper secondary schools in mathematics and science if trials show this leads to better educational outcomes.
The return from participation in high quality early childhood education and care (ECEC) is very high, especially for children from lower socio-economic backgrounds, who tend to participate less in it. There are some indications of quality issues in the ECEC system.	<b>Review the ECEC system with the objective of raising quality and removing barriers to more equal access to high quality ECEC.</b> <b>Consider extending the length of “year” 0, which is not a full school year currently, and adapt its content to ensure a smooth transition into school.</b>
Fewer girls go into scientific and technological careers.	Provide training to teachers to foster awareness of their own conscious and unconscious gender biases. Increase school talks by women leaders in mathematics, science and technology and men in arts and humanities.
<b>Strengthening the Māori medium pathways</b>	
There are very few assessments tools for years 0-10 in the Māori-medium pathway. Late entry into the pathway creates significant challenges to bring students to the level required to learn in the Māori language.	Develop new assessment tools alongside the refreshed Māori-medium curriculum, notably diagnostic-type assessments of needs of all children in the pathway and entering it.
An important challenge is to build the pathway up at the secondary level but there is a shortage of qualified teachers.	Continue to encourage more Māori-medium initial teacher education completions at the secondary level, using scholarship programmes, where ITE students are obligated to work as teachers in Māori-medium or Kaupapa Māori schools for several years in return for financial support.
<b>Raising attendance and preventing bullying</b>	
Attendance at school remains below pre-Covid levels. A low sense of school belonging, ambivalent parent and learner attitudes and a high prevalence of bullying contributes to this. Research suggests that whole-of-school-and-community anti-bullying programmes are effective.	Run a campaign to improve parent attitudes to school attendance. Expand whole-of-school-and-community anti-bullying programmes like KiVa to more schools together with a New Zealand based evaluation.
<b>Assisting children with disabilities and learning support needs</b>	
There is insufficient aggregate and individual information on extra learning needs to allocate resources efficiently.	Provide a national database and nomenclature of individual learning needs to better inform resourcing decisions and targeting.
Teachers are overly reliant on Reading Recovery that fails to improve learning outcomes for a significant minority of children.	Continue to expand support to alternative interventions with different methods including structured literacy and phonics to teach reading.



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