Generative artificial intelligence in Aotearoa New Zealand primary schools

Teacher and student survey findings

David Coblentz, Jessie Dong, and Bronwyn Gibbs

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Rangahau Mātauranga o Aotearoa

Rangahau Mātauranga o Aotearoa | New Zealand Council for Educational Research
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Wellington
New Zealand

www.nzcer.org.nz

https://doi.org/10.18296/rep.0077

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Executive summary

This study provides a snapshot of how generative artificial intelligence (AI) is emerging in teaching and learning within Aotearoa New Zealand's primary classrooms (Years 5–8). The results of two online surveys gathered at the end of 2024 are presented. The first includes responses from a cohort of 266 primary school teachers who were disproportionately interested in generative AI; the second from 147 students spread across four case study schools. Taken together, the surveys suggest that generative AI is in use in New Zealand primary schools by both teachers and students as well as pointing to gaps in policy, resourcing, and professional learning.

Surveyed primary teachers were experimenting widely with generative AI tools. Nearly seven in 10 users reported employing an AI tool at least weekly, chiefly for lesson planning, assessment design, and personalising learning materials. Most teachers relied on free chatbots, especially ChatGPT and Google Gemini, supplemented by AI-enabled content platforms such as Twinkl. Three-quarters of responding teachers have no school-funded premium AI tool access, and a similar proportion do not pay for their own tools, leaving most teachers using older, less capable large language models (LLMs) that are often more prone to error or bias. Even among our cohort of disproportionately interested teachers, fewer than half felt confident teaching responsible AI use, and most (85%) wanted more training in the use of generative AI tools.

Our student data paint a complementary picture. Roughly nine in 10 ākonga had heard of AI and more than half reported using generative AI tools, though regular (at least weekly) users were still in the minority. Self-reported student use was higher outside school than inside, and activities ranged from drawing images and chatting with AI tools "like a friend" to fixing writing or getting homework ideas. Many ākonga viewed AI as helpful yet also "a bit like cheating", and most were unsure of the rules at their schools. Most students did not recall adult guidance on when or how to use AI.

This report suggests a need for centrally supported professional learning, better privacy-protected access to premium LLMs, culturally supportive school and national policies, and iterative integration of age-appropriate AI critical literacy in the curriculum. Aotearoa New Zealand could potentially draw on emerging frameworks in countries such as Australia, Canada, and the UK, tailoring these to honour Te Tiriti o Waitangi and other aspirations for the education of tamariki in Aotearoa New Zealand.

1. Introduction

Despite the rapid development and increasing global adoption of generative AI tools, their use in Aotearoa New Zealand primary schools is not well understood. While anecdotal evidence suggests some level of adoption, there has been little formal data collection about how primary school teachers and their students are using these tools either in New Zealand or internationally. This study aims to contribute to addressing this gap by exploring how Aotearoa New Zealand primary teachers and their students, specifically Years 5–8, use generative AI tools for teaching and learning. It investigates how AI tools are being adopted, adapted, and interpreted by teachers and students, along with the opportunities and challenges they present.

Early reactions to AI in education

Reactions among educators to the initial wave of enthusiasm for generative AI tools in 2022 ranged from outright bans—driven primarily by fears of cheating or misinformation—to a recognition of potential benefits for teachers. Discussions on social media and in policy circles reflected these mixed feelings. Some teachers enthusiastically shared how AI could enhance their lessons, while others raised concerns about students using LLMs to help avoid learning as well as about the spread of AI-generated misinformation (Fütterer et al., 2023). The United Nations Educational, Scientific and Cultural Organization's (UNESCO's) first global guidance on generative AI in education, released in late 2023, reflected these mixed sentiments. UNESCO noted that fewer than one in 10 schools and universities worldwide had any formal policies or guidance on AI as of 2023 and called for urgent measures to harness AI's opportunities and manage its risks. Among UNESCO's recommendations were promoting equity, protecting human agency in learning, and ensuring the ethical use of AI (UNESCO, 2023). These themes seem particularly important for primary education, where younger learners may be less able to critically evaluate generative AI content.

Policymakers have begun responding to these challenges. By the end of 2024, at least 20 US state education departments had issued K–12 AI guidelines or policy frameworks for schools, often moving beyond initial fears toward more nuanced strategies (Ryan, 2024). Similarly, the UK Department for Education released official guidance on using generative AI in schools—updated in January 2025—emphasising safe, responsible use while still permitting experiment and innovation (UK Department for Education, 2025a). Around the world, the conversation is increasingly shifting from whether AI should be used in classrooms at all to how it can be integrated in ways that support quality teaching and learning while upholding ethical standards.

Teacher and classroom perspectives

Teachers have been shown to feel cautious optimism about using AI to support their work. In one recent New Zealand study, teachers acknowledged ChatGPT's potential to assist with lesson planning and resource creation, even as they remained wary of its limitations (Ashby, 2024). Surveys of Australian teachers found that nearly half expressed optimism that AI tools like ChatGPT can benefit classroom practice, believing the advantages outweigh the risks (Capgemini Research Institute, 2023).

By mid-2023, a poll of US educators found that most (84%) of those who had tried ChatGPT felt it had a positive impact on their teaching, citing uses such as generating ideas for lessons, tutoring support, or administrative time savers (Arundel, 2023).

Early classroom pilots have also demonstrated AI's potential to assist with student learning. A recent study in Uruguay tested ChatGPT-powered tools in primary classrooms to adapt reading passages and exercises in real time to each student's skill level (Jauhiainen & Guerra, 2024). Students who used the AI-personalised content showed improved engagement and gains in reading-comprehension, as the targeted materials better matched their individual learning needs (Jauhiainen & Guerra, 2024). Such findings align with more general hopes that AI can enable better differentiated, student-centred learning experiences in primary education (Gander & Shaw, 2024). Teachers in various national contexts have also reported using generative AI to support students, including providing ideas to provide extra content for learners who need extension and also offering additional guidance to students who are struggling (Uğraş & Uğraş, 2024). In New Zealand, some primary teachers (particularly in Years 5–8) are experimenting with AI-based chatbots as "virtual teaching assistants" to provide simplified explanations of complex topics (Nicol-Williams, 2025). Some New Zealand teachers have reported that AI tools are helping them generate creative story prompts and simulate conversations in te reo Māori for students to practise in class (Nicol-Williams, 2025; Shaw, 2024).

In aggregate, the evidence thus far suggests that there is opportunity for generative AI to enhance teaching practice and also possibly student learning in primary schools. Reported benefits include increased teacher planning efficiency, more personalised feedback for students, and new ways to engage learners (Jauhiainen & Guerra, 2024; Johnston, 2024). Advocates also argue that AI tools can help teachers differentiate instruction in a class with mixed abilities (Gander & Shaw, 2024). Generative AI tools can also provide language support, which can be useful in multilingual primary classrooms (Shaw, 2024). In short, the promise that generative AI holds is to augment the resources and training of teachers and to consequently help them better address longstanding challenges in primary education.

Challenges and concerns

There is broad agreement that there are major challenges that must be addressed before generative AI's promise can be fully realised in schools. Using generative AI tools requires critical digital literacy and critical thinking in new contexts, both for students and teachers. In particular, young students may not yet have the skills to distinguish AI-generated content from human-sourced information, raising the risk of mislearning based on hallucinated or biased information.[1] There are also concerns that over-reliance on AI could erode learners' development of independent critical thinking, especially if students start using tools to do their writing or researching for them (UNESCO, 2023). It is therefore important to teach students how generative AI works and to make sure learners develop the digital literacy and criticality necessary to evaluate generative AI output (Kasneci et al., 2023). In a recent UK survey, about one in five (21%) of those aged between 13 and 18 admitted they do not always check the accuracy of AI-provided answers and only two in five (40%) responded affirmatively that they do always check, suggesting a need for better support in evaluating AI information (National Literacy Trust, 2024). Developing students' digital literacy has become a priority in some newer primary curricula (Government of British Columbia, 2024).

1 In the context of LLMs, to "hallucinate" means to confidently generate information—such as facts, names, or details—that sounds reasonable but is actually incorrect or made up.

There are also concerns that AI could enable plagiarism or otherwise undermine learning. For example, AI can produce essays or math solutions that some students might simply copy (Lin, 2024). In a late-2023 US survey, one-quarter of K–12 teachers felt AI tools would do "more harm than good" in education, primarily due to cheating and content accuracy issues (Lin, 2024). Younger children may not understand the ethical implications of using AI to do their work or the consequences for their own education. This has prompted discussions about explicitly integrating ethical guidelines and honour codes for AI use at school (Lake, 2024). Many schools in New Zealand and abroad have begun updating their academic honesty policies to clarify when and in what ways students may use generative AI in their assignments (Nicol-Williams, 2025).

AI models trained on internet data may propagate stereotypes or inadvertently marginalise groups with less comprehensive or biased internet representation. This concern is particularly important in Aotearoa New Zealand's bicultural context. Māori educators and scholars have highlighted that most mainstream AI tools have limited knowledge of te reo Māori or mātauranga Māori, and they often reflect predominantly Western perspectives (Shaw, 2024). If their use in education is not handled with care, LLMs have the potential to create culturally insensitive or inaccurate content for ākonga Māori. Some AI writing assistants struggle to handle Māori names or iwi references, and there is some concern among teachers that students could be misled by AI content that omits Indigenous perspectives (Shaw, 2024). Culturally responsive teaching with AI requires educators to take steps to use AI tools in ways that affirm students' identities and languages, as shown by New Zealand's Ministry of Education caution that current internationally developed tools are often "weak on Mātauranga and Te Reo Māori" (Ministry of Education, 2024; Shaw, 2024).

Equity concerns

More generally, there is also a risk that AI could widen equity gaps (between teachers, schools, and students) if access or training are uneven. More affluent schools or those with more tech-interested staff might run ahead in AI adoption, while less affluent or rural schools may be left behind. A recent US analysis found early signs that advantaged, suburban school districts are integrating AI faster than high-poverty districts, due in part to better infrastructure and more abundant professional development (Weiner et al., 2024). Likewise, an Australian study has recently shown that more than one-fifth of students in disadvantaged schools lack adequate digital resources, compared with only a small fraction (2%) in advantaged schools, and also that only about two in five teachers feel well prepared to use information and computing technology for teaching, suggesting a need for reliable devices and sustained professional learning (Loble & Stephens, 2024).

Teacher guidance and professional development

In an October 2024 survey, 58% of US teachers said they had received no training about how to use generative AI tools in the classroom (Langreo, 2024). Some evidence suggests that New Zealand primary teachers may echo this, as many are interested in using generative AI but feel "in the dark" about best practices and are worried about making mistakes (Ashby, 2024). Without targeted professional learning, early adopters tend to be a small "super-user" subset of teachers, while the majority hold back (Weiner et al., 2024). This points to the importance of system-wide capacity building. Across countries, education authorities are beginning to provide training resources for teachers on AI. For example, Australia's national framework is accompanied by online modules and a toolkit for teachers with scenario examples (Australian Department of Education, 2023).

Emerging policy and regulatory responses

Aotearoa New Zealand

Policymakers have begun formulating strategies to manage the rise of AI use in schools. In Aotearoa New Zealand, the Ministry of Education released an initial advisory on generative AI (Ministry of Education, 2024). This guidance acknowledged AI's growing role in education and provided high-level principles for schools, emphasising student safety, data privacy, and the primacy of human judgement. Schools have been encouraged to update their digital technology policies to cover AI use, and to approach classroom experiments with generative AI in a cautious, supervised manner (Ministry of Education, 2024).

By early 2025, work was underway to develop more comprehensive frameworks; however, a clear national policy or curriculum integration plan for AI in primary education remains in progress.

Australia

Other countries offer useful points of comparison. Australia moved quickly with the *Framework for Generative AI in Schools*, a nationwide policy framework to guide ethical and effective AI use in all schools (Australian Department of Education, 2023). The Australian framework outlines expectations around issues such as privacy (e.g., not inputting sensitive student data into AI tools), equity of access, teacher training, and alignment with the national curriculum. It effectively lifted blanket bans on tools such as ChatGPT (which some Australian states had temporarily in place in early 2023) and replaced them with a more nuanced, risk-managed approach (Australian Department of Education, 2023).

Australian jurisdictions have since been adding their own guidelines. The Association of Independent Schools of Western Australia released *AI Guidelines for Schools 2024* (Association of Independent Schools of Western Australia, 2023). New South Wales refreshed its curriculum in line with the Australian framework (NSW Department of Education, 2024) and trialled NSWEduChat, its own generative AI tool, during 2024. The *Victorian Curriculum F-10 Version 2.0* also included AI literacy in some subjects (Victorian Curriculum and Assessment Authority, 2024). South Australia has extended its own EdChat chatbot to system-wide English-language assessment, saving about 15,000 teacher hours a year and marking Australia's first government-approved AI grading tool (Bita, 2025; South Australia Department for Education, n.d.). Overall, national uptake is accelerating: a 2025 survey shows one in five schools plan to introduce or expand AI within a year (Campion Education, 2025).

Canada

Canada, where education is provincially governed, has seen a patchwork of responses. Some provinces have been proactive—British Columbia published guidelines in July 2024 on the "ethical, responsible, and safe use of AI in K–12 education", emphasising a human-centred approach and offering support materials for schools (Government of British Columbia, 2024). In Alberta, the provincial school boards association released an AI policy guide for K–12 in September 2024 to help schools develop their own local policies (Alberta School Boards Association, 2024).

National bodies such as the Canadian Teachers' Federation have called for urgent action to ensure AI in education is well governed and equitable across all provinces (Canadian Teachers' Federation, 2024). Canadian teacher unions and professional associations (e.g., the Elementary Teachers' Federation of Ontario) have also issued advisories for educators on how to approach generative AI in classroom settings (Elementary Teachers' Federation of Ontario, 2024). These efforts indicate a

recognition in Canada that, without clear policies, the burden falls on individual teachers to navigate generative AI's challenges, which many argue is untenable (Canadian Teachers' Federation, 2024).

United States

In the US, a wave of state-level initiatives took off after 2023. By early 2025, roughly half of US states had published some form of K–12 AI guidance or strategic framework (Merod, 2024; Ryan, 2024). Some states such as California and Oregon released guidance for school districts on AI's classroom use as early as mid-2023 and were followed by states including North Carolina, Kentucky, New Jersey, and Washington (Lake, 2024; Weiner et al., 2024). These documents commonly advise on protecting student data privacy, addressing AI in academic integrity policies, and educating students about AI. Some states have gone further. For example, Tennessee passed a law in 2023 requiring every school district to adopt an AI policy by the end of 2024 (Lake, 2024). At the federal level, the US Department of Education published an "AI in Education" toolkit in October 2024 to guide schools and districts nationwide (Merod, 2024). This provides strategies for teacher training and highlights best practices (US Department of Education, 2024). It also reinforces civil rights considerations, cautioning schools to ensure AI does not inadvertently discriminate or exacerbate inequality (US Department of Education, 2024).

United Kingdom

In the UK, beyond the Department for Education's policy guidance (UK Department for Education, 2025c), there have been parallel efforts to investigate AI's implications. The UK government in 2023 convened a multidisciplinary panel and issued two reports on generative AI in education (UK Department for Education, 2024a, 2024b), suggesting an intent to develop evidence-based policy. Although the UK has not banned AI tools in schools, it has left specific adoption decisions to schools, with the expectation that they follow existing laws on data protection, child safety, and intellectual property (UK Department for Education, 2025a, 2025b). Moreover, professional bodies such as Ofqual (exam regulator) have provided guidance to UK schools about how to detect AI-assisted cheating, and organisations such as the National Literacy Trust have researched AI's impact on student literacy to inform educators (National Literacy Trust, 2024).

Some international organisations have also contributed to the policy landscape in New Zealand's peer countries. UNESCO's 2023 guidance encourages all nations to craft regulations that ensure safety and inclusion in educational use of generative AI (UNESCO, 2023). The Organisation for Economic Co-operation and Development's (OECD's) 2023 *Digital Education Outlook* likewise calls for governance to maximise AI's benefits while mitigating risks, urging collaboration between tech providers and educators (OECD, 2023).

In some ways, by not moving first, New Zealand is in an advantageous position to learn from these overseas developments and incorporate the lessons of these efforts into its own national planning. Important global themes include establishing policies for the use of generative AI tools for both teachers and students, updating curriculum documents to incorporate generative AI skills (such as critical AI literacy), investing in teacher professional development and infrastructure, and ensuring that policies consider equity as well as the local cultural context. For New Zealand, with a commitment to Te Tiriti o Waitangi and a diverse student population, policy must also address how AI tools intersect with Indigenous rights (e.g., language preservation) and social inclusion (Shaw, 2024). Globally, there is a growing consensus that proactive guidance is needed to steer the use of AI in ways that support the aspirations and values of national education systems.

Strategy for this study

Much of the discourse surrounding primary school use of generative AI has thus far been speculative or based on teacher anecdotes, with relatively little data on how primary teachers and students are using (or not using) AI in classrooms (Ashby, 2024; Zhai, 2023). This study helps address that gap by providing data and insights from the Aotearoa New Zealand primary school context.

We focused on the upper primary years (Years 5–8), examining both teacher and student experiences with generative AI tools for teaching and learning. This study explores how early adopting primary teachers are integrating generative AI into their practice, how they perceive the opportunities and challenges, and how their students are engaging with AI under teacher guidance. In doing so, we pay special attention to the key themes identified in the global debate: digital literacy and student competencies; culturally responsive use of AI (including support for te reo and tikanga Māori); equity of access; ethical considerations; and the professional learning needs of teachers.

Because participation was self-selected, we anticipated and confirmed in data collection that our sample would be skewed toward primary teachers already interested in and experimenting with generative AI in their teaching practice. Rather than aiming for a fully representative national picture, the study deliberately focuses on these early adopting educators to provide an initial evidence base that shows what is already happening in some New Zealand primary classrooms, how teachers are balancing benefits and risks, and some of the issues the sector will need to address as generative AI tools evolve and teacher use expands.

In the sections that follow, we present the study's results alongside discussion of their implications for teaching and learning as well as for policy. Our aim is to contribute to the development of a proactive, culturally attuned approach to AI in New Zealand primary education that is supportive of innovation while safeguarding the wellbeing of tamariki.

2. Methodology

The study was designed around paired online surveys—one for Years 5–8 teachers in New Zealand and an optional additional survey for their students.

Participant recruitment

The teacher survey was promoted through social media advertisement and NZCER's newsletter in addition to being shared by other education groups. All teachers who responded to the teacher survey were asked whether they wanted to include their classes. Those who did were guided through the student consenting process and then given individualised survey links for their classes. Participating classes were censused rather than sampled—all students in each participating class were invited to complete the student survey.

Survey design

Separate surveys were designed for teachers and students, with content informed by a literature review and focus group discussions. The surveys included questions on the frequency and context of AI tool usage, perceptions of generative AI use in primary school teaching and learning, culturally responsive teaching, ethical considerations, and equity issues.[2]

Questions in the teacher survey were predominantly structured as five-point Likert-scale items, enabling respondents to express their degree of agreement or disagreement with a range of statements. Questions in the student survey were simplified by using three-point 'yes/no/don't know' or 'agree/disagree/don't know' items. Open-ended questions were used to collect more detailed information on some topics. For the student survey, a list experiment question was incorporated when asking students whether they used generative AI tools in ways their school might not approve.

The order of items within question blocks was randomised.

Data collection procedures

The surveys were administered online via Survey Monkey, with the teacher and student surveys available in English. Te reo Māori versions were considered but not pursued because the surveys were designed primarily for English-medium rather than kaupapa Māori and Māori-medium teaching contexts.

Data collection for the teacher survey occurred from 24 November 2024 to the end of Term 4. The student survey was available to classes after they completed the informed consent process.

2 Survey questions about culturally responsive teaching were reviewed by Te Wāhanga at NZCER to ensure that the instruments were culturally sensitive and relevant to the New Zealand educational context.

Data analysis

Quantitative data analysis was conducted using R version 4.2.2 or later. Qualitative data analysis was done using NVivo 14.

Inferential statistical questions were addressed through hypothesis testing; chi-squared tests were used except in cases where the chi-squared approximation was poor, in which case Fisher's exact test (n x m) was used instead. The False Discovery Rate (FDR) method was used to control the type II (false-positive) error rate, and all p-values presented in this report are post-adjustment p-values. Survey data are generally presented in this report using either frequency tables, stacked bar graphs, or both.

Cross-tabulation was conducted to compare high-interest subgroups of survey respondents. Teachers who indicated that they were more interested in AI than their peers were compared to all other respondents for all survey questions. In addition, answers from Māori respondents were compared to non-Māori respondents for the culturally responsive teaching questions. Full cross-tabulation results are not presented in this report. However, all statistically significant findings are discussed.

Student survey participation was limited, with four schools providing usable student survey data. Consequently, these schools were analysed as individual case studies. Due to the amount of variation between schools for some questions and the unequal number of responses from each participating school, the research team concluded that it might be misleading to combine the student data across schools.

Ethical considerations

Informed consent was obtained from all teacher participants. Principal approval was obtained for schools where student data were collected. Additionally, age-appropriate information sheets explaining the research and participant rights were distributed to students. Separate information sheets were distributed to whānau, who were invited to opt-out their tamariki if they did not want them to participate. Care has been taken to protect the privacy and confidentiality of all participants.

No individuals or schools are named in this report.

3. Teacher survey

In total, 266 teachers provided usable data. Not all respondents were asked all questions; branching logic was used to avoid asking follow-up questions of teachers whose previous answers made further questioning in the context of a particular topic unproductive. For example, teachers who indicated that they did not regularly use generative AI tools were not asked follow-up questions about their use. Questions not seen by all participants are noted as part of the discussion of the findings.

Profile of teacher respondents

Participating teachers were relatively balanced across targeted year levels, though the respondents were slightly skewed toward those teaching younger students. Many respondents taught multiple year levels, so numbers in Table 1 sum to more than the total number of survey respondents.

TABLE 1: **What year levels do you currently teach? (n = 232)**[3]

Response	Count	Percent
Year 5	120	52%
Year 6	114	49%
Year 7	102	44%
Year 8	105	45%

The remainder of the demographic questions were placed at the end of the survey. Respondents who did not complete the entire survey did not answer these questions. Additionally, some respondents who did answer all previous questions chose not to answer some demographic questions.

Two-thirds (65%) of the responding teachers reported a greater interest in AI than other teachers at their school, approximately one quarter (27%) stated their interest was about the same as other teachers, and only a small number (8%) felt less interested. This suggests that, as expected, the responding cohort reflect a more engaged subset of teachers rather than a representative cross-section.[4]

3 Some teachers provided complex answers to this question that made it clear they were eligible but not exactly what year levels they taught. These teachers were included in the analysis but not in this table.

4 The "teachers' interest" question was located in the demographics section at the end of the survey, and not all respondents chose to complete this section. However, as the "Greater than" group outnumbered the "Less than" group among those who did respond by roughly eight to one, those who did not respond would have to be even more skewed (since there were fewer of them) toward the "Less than" group to result in an overall distribution that did not favour "Greater than" respondents. As an additional precaution, we also compared the responses given by teachers who did and did not complete the demographics section, and their aggregate responses were generally similar.

TABLE 2: **Teachers' interest in AI compared with other teachers at their school (n = 148)**

Response	Count	Percent
Greater than	96	65%
About the same as	40	27%
Less than	12	8%

The age distribution of respondents was approximately normally distributed. The largest age group was 45–54 years (44%), followed by 35–44 years (22%), and 55–64 years (19%). Younger teachers (25–34 years) made up 10%, with a smaller fraction (5%) aged 65 and over.

TABLE 3: **Teachers' age group distribution (n = 150)**

Response	Count	Percent
25–34 years	15	10%
35–44 years	33	22%
45–54 years	66	44%
55–64 years	28	19%
65 years and over	8	5%

In comparison to the overall population of teachers in New Zealand, Pākehā (88%) and Māori (15%) were slightly over-represented among respondents in comparison to their proportions in the New Zealand teacher population as a whole. In contrast, Asian and Pacific Peoples teachers were slightly under-represented.[5] In the table below, the ethnicity percentages sum to more than 100% as participants could select more than one ethnicity.

TABLE 4: **Teacher ethnicity distribution (n = 149)**

Response	Count	Percent
NZ European/Pākehā	131	88%
Māori	23	15%
Asian	5	3%
Pacific Peoples	5	3%
Middle Eastern/Latin American/African	1	1%
Prefer not to say	4	3%

Most respondents were female (76%), about one-fifth (22%) were male, and a small number either preferred not to disclose their gender or identified as another gender (combined 2%). This distribution is consistent with the population of New Zealand teachers.

5 Ministry of Education. (n.d.). *Teacher numbers | Education Counts. https://www.educationcounts.govt.nz/statistics/teacher-numbers#5*

TABLE 5: **Teachers' gender distribution (n = 150)**

Response	Count	Percent
Female	114	76%
Male	33	22%
Prefer not to say	2	1%
Another gender	1	1%

Most respondents (85%) indicated that their primary role was as a classroom teacher. A disproportionate percentage of respondents held leadership positions, with 13% serving as curriculum/syndicate leaders for technology and 25% serving as curriculum/syndicate leaders for other learning areas. Other roles included assistant or deputy principals (13%), subject specialists in technology (8%), principals (3%), and staff representatives on the board of trustees (3%). This information was used in conjunction with the "What year levels do you currently teach?" question to help filter out respondents who are not currently teachers or who taught tamariki whose ages were outside the scope of the study.

TABLE 6: **What are your main roles/responsibilities within your school? (n = 143)**

Response	Count	Percent
Classroom teacher	122	85%
Curriculum/syndicate leader—other learning area(s)	36	25%
Curriculum/syndicate leader—technology	19	13%
Assistant or deputy principal	18	13%
Subject specialist—technology	11	8%
Principal/Tumuaki	5	3%
Staff representative on the board of trustees	4	3%

Teachers were given the option to identify their schools, and among the minority who did, the distribution of schools was skewed toward the two lowest equity index groups (fewer and moderate social barriers to achievement, corresponding to more advantaged children), following an approximate ratio of 40%, 40%, and 20%.[6] This is consistent with the global evidence discussed in the introduction suggesting that early movers in generative AI are less likely to be found in financially disadvantaged contexts.

6 https://www.educationcounts.govt.nz/data-services/guidelines/school-equity-index-bands-and-groups

4. Teacher use of generative artificial intelligence

This section explores how teachers are integrating AI tools into their teaching practices.

Frequency of use

Teachers were asked how frequently they use AI tools to support their teaching. More than two-thirds (69%) of respondents used generative AI tools at least weekly. A further one in ten (10%) reported using them monthly. Only one-fifth of respondents (21%) used generative AI tools less than once per month. To avoid burdening rare users, only teachers who used AI at least monthly were asked follow-up questions about their own use. The remainder were skipped forward to the section on student use. As expected, increased frequency of teacher use of generative AI tools was linked to stronger interest in AI (p-value = 3.7e-3).

TABLE 7: **How frequently do teachers use AI tools to support their teaching? (n = 261)**

Response	Count	Percent
Daily	48	18%
Several times a week	68	26%
Weekly	65	25%
Monthly	26	10%
Less than once per month	54	21%

Tools used by teachers

Among those who use AI tools at least monthly (n = 190), nearly all (96%) employed generative AI chatbots—such as ChatGPT, Microsoft Copilot, or Google Gemini—to support their teaching, and most (74%) used educational content platforms that contain AI elements, such as Twinkl or Brisk. Smaller proportions use AI-powered assistants (34%), image creation tools (29%), speech recognition and transcription tools (21%), adaptive learning platforms (9%), and automated marking tools (4%). This pattern suggests the emerging role of conversational and content support technologies in the primary school classroom. Teachers who identified as more interested in generative AI reported significantly greater use of generative AI chatbots ($p < 0.0e-8$), educational content platforms ($p = 1.2e-3$), image creation tools ($p = 7.5e-4$), and AI-powered assistants ($p = 2.9e-3$) compared to their peers.

TABLE 8: **AI tools teachers have used to support their teaching (n = 190)**

Response	Count	Percent
Generative AI chatbots: (e.g., ChatGPT, Microsoft Copilot, Google Gemini)	182	96%
Educational content platforms: (e.g., Twinkl, Brisk)	141	74%
AI-powered assistants: (e.g., Siri, Alexa)	64	34%
Image creation tools: (e.g., DALL·E, Adobe Firefly, Midjourney)	56	29%
Speech recognition and transcription tools: (e.g., Otter.ai)	40	21%
Adaptive learning platforms: (e.g., Squirrel AI, Knewton)	17	9%
Automated marking tools: (e.g., CoGrader, AutoMark)	8	4%

The most common area where primary school teachers were using AI tools to support their teaching was lesson planning (82%), followed by designing assessments (66%), personalising learning experiences (65%), conducting teaching research (59%), and writing student feedback reports (51%). Fewer teachers used AI for professional development (45%), administrative support (35%), or marking and providing feedback (26%), with a negligible number (2%) not employing these tools for any of the listed tasks. Those teachers who reported having more interest in generative AI had significantly greater use of AI for lesson planning ($p < 0.0e-8$), personalising learning ($p < 0.0e-8$), designing assessments ($p < 0.0e-8$), writing student reports ($p = 1.8e-3$), and professional development ($p = 1.5e-4$).

TABLE 9: **Tasks teachers use AI tools for (n = 191)**

Response	Count	Percent
Lesson planning: Creating lessons and gathering resources	157	82%
Designing assessments: Developing quizzes, tests, or other assessments	126	66%
Personalising learning: Adapting content to individual student needs	125	65%
Research for teaching: Building my area knowledge about a topic or subject that I am teaching	113	59%
Writing student reports: Summarising student progress and achievement	97	51%
Professional development: Learning new skills, exploring teaching strategies, or staying updated on trends	85	45%
Administrative support: Managing tasks like scheduling, communication, or data organisation	67	35%
Marking and providing feedback: Evaluating student work and offering detailed feedback	50	26%
None of the above	3	2%

Teachers were invited to share one to two recent prompts they had used to help them achieve one of these tasks. In total, they shared 81 recent prompts. The most common themes were prompts for lesson resources (53%), unit and lesson planning (33%), and giving feedback to students (e.g., report writing) (14%).

Examples of lesson planning prompts included asking AI to "create a descriptive piece of writing … suitable for an 8-year-old to read and understand", or "develop a multi-choice quiz for settlement in the Northland area". One teacher's prompt was "I want to make a maths escape room with the theme 'Mission Impossible' … Create 10 algebraic tasks to solve." In terms of lesson and unit planning prompts, teachers regularly sought AI-generated plans connected to *The New Zealand Curriculum* and the Aotearoa New Zealand context. For example, "Please create a 25min lesson plan suitable for NZ Years 7 & 8 students to introduce them to what non-profit organisations are … Make the lesson interactive."

To support giving feedback to students, one teacher provided this prompt:

> Please write a 100-word mathematics report comment for a male student called [name redacted]. He is a diligent math learner, participates keenly in discussions about how to solve problems and takes clear notes to refer back to. He is gaining confidence performing operations on decimal numbers and fractions. His next step is to increase comprehension of word problems to identify the maths involved and choose an efficient strategy to solve it.

These findings support several conclusions. First, a significant portion of respondents use AI tools frequently—nearly half report daily or several-times-weekly usage—indicating that many responding primary school teachers have integrated AI tools into their regular teaching practice. The frequent use of generative AI chatbots and educational content platforms underscores these specific tools' usefulness in supporting primary teachers in lesson planning, assessment design, and personalising learning experiences and suggests that teachers may be primarily turning to generative AI tools to save time with preparation for teaching, focusing on tasks that require heavy cognitive and time commitments.

School-supported tools

Seventy-three percent of respondents indicated that their school does not provide access to premium versions of generative AI tools (Table 10). However, nearly one in five (18%) did report having such access, and approximately one in 10 (9%) were unsure. Overall, though, this suggests that most teachers currently rely on free or self-sourced tools rather than school-funded premium versions.

A review of the open-ended responses shows that Twinkl, ChatGPT, and Google Gemini were the most frequently mentioned school-provided AI resources. Several respondents also referred to Microsoft Copilot, Claude, and Brisk, sometimes explicitly specifying that they used "basic" or "not workspace integrated" versions. A smaller number cited tools such as Writer's Toolbox. Overall, Twinkl was referenced most often, followed by ChatGPT and Gemini.

TABLE 10: **Does school provide access to any premium (paid) version of generative AI tools to teachers? (n = 154)**

Response	Count	Percent
No	113	73%
Yes	27	18%
Not sure	14	9%

Most teachers (73%) reported that they did not pay out-of-pocket for generative AI tools, although more than a quarter (27%) did (Table 11). Of those who are paying for access to AI tools, ChatGPT and Twinkl (sometimes referred to as "Twinkl Premium", which has recently added some generative AI features) were the most frequently mentioned tools, with several respondents noting that they had personally subscribed to ChatGPT (some only for a limited period) and Twinkl's paid services. A smaller number of teachers referenced additional generative AI tools such as Claude, Perplexity, Midjourney, Canva (and its AI features), Synthesia, Aiako, Diffit, and various subject-specific AI tools (e.g., "TeacherGPT", "TeachAid", "Magicschool", "Realfastreports", "Julius AI", and "Lindy.AI"). A few teachers indicated they paid for multiple AI services, while others noted that they had tried a subscription briefly before cancelling.

TABLE 11: **Do you personally pay for any generative AI tools that you use to support your teaching? (n = 154)**

Response	Count	Percent
No	113	73%
Yes	41	27%

We believe it is significant that most respondents do not have school-provided premium tools, nor do they personally invest in them. As the more capable LLMs are not available to non-paying users, there are likely untapped opportunities for greater institutional support and resource allocation to maximise the quality of AI used in New Zealand classrooms. Since many teachers are currently using LLMs to prepare classroom materials, it may be possible to improve primary teaching quality as well as improving teacher quality of life simply by giving teachers access to better, premium LLMs with more accurate research capabilities and larger context windows.

In addition, our findings also raise the question about whether even high-use, early AI adopters in the primary school sector are generally aware of the capabilities of premium/paid LLMs. In addition to introducing opportunity costs into their teaching, having limited experience with premium models may also lead teachers to underestimate what older primary school students with access to premium models may be able to use these tools to do.

Teacher perspectives on teaching with AI

This section captures teacher attitudes and first-hand experiences using generative AI tools to support their teaching, offering insights into the perceived benefits, challenges, and support needs.

A majority of surveyed teachers (83%) agreed that AI can save time without diminishing the human aspects of teaching, suggesting optimism about its potential to streamline administrative and

instructional tasks (Figure 1). Most respondents (81%) also felt familiar with the potential biases and limitations of these tools. Over half (55%) saw AI as a means to generate high-quality feedback for students. However, nearly a third (31%) remained neutral, indicating some uncertainty about its effectiveness in this role.

Almost half of teachers experienced issues with AI tools not being customised for Aotearoa New Zealand. Teacher confidence in their ability to teach responsible and ethical use of AI was moderate, with less than half (44%) of respondents feeling assured in this area. A similar number (42%) expressed trust in the accuracy of the generative AI tools they use, almost as large a group (37%) were neutral, and one-fifth were negative (20%). Less than half of surveyed teachers felt adequately supported to incorporate AI into their practices.

Teachers who were more interested in generative AI estimated a significantly higher proportion of their students were using AI tools to support learning at school compared to their peers (p = 1.66e-2). Teachers who were more interested in generative AI also showed significantly higher trust in AI-generated content (p = 3.30e-2), felt more confident teaching responsible AI use (p = 3.30e-3), were more familiar with AI biases and limitations (p = 8.30e-3), and more strongly endorsed AI's potential to provide high-quality feedback (p = 1.67e-3) and save teachers time without diminishing teaching quality (p = 1.09e-3).

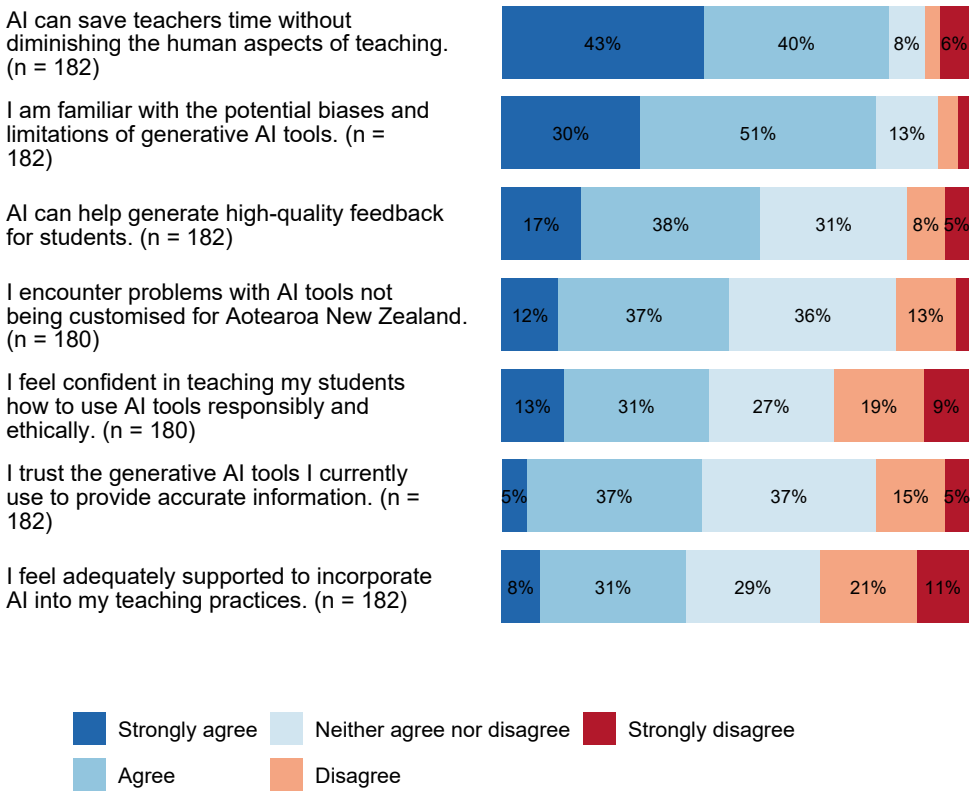

FIGURE 1: **Teacher perspectives on teaching with AI**

More than two-thirds (68%) of surveyed teachers have observed inaccuracies in information generated by AI tools. Teachers who were more interested in generative AI reported observing inaccuracies in AI-generated content more frequently (77%) than their peers (57%, p = 3.67e-2), which may simply be a consequence of greater use of generative AI among this group. However, it may also be the case that greater interest (and exposure) to generative AI models makes teachers more likely to be able to identify inaccuracies in their output.

TABLE 12: **Whether teachers have observed inaccuracies in information they have created with generative AI tools (n = 183)**

Response	Count	Percent
Yes	124	68%
No	29	16%
Not sure	30	16%

These insights demonstrate that, while surveyed teachers are optimistic about AI's ability to enhance teaching practices and save time, some are also encountering challenges as they try to incorporate generative AI tools into their teaching. Specific issues mentioned included a lack of New Zealand-specific customisation and concerns over the accuracy of AI-generated content. For the New Zealand educational sector, we believe that these findings highlight the need to develop clear guidelines about what tools teachers should use as well as suggesting the need for more professional learning and development (PLD) support.

5. Teacher perspectives on student AI use

Teachers' perceptions of primary student AI use

Most teachers (71%) reported that their schools did not provide AI tools for student use, with 16% unsure and only 13% confirming provision. Schools where teachers expressed greater interest in generative AI were significantly more likely to provide AI tools for student use (p = 1.13e-2).

TABLE 13: **Does your school provide AI tools for student use? (n = 195)**

Response	Count	Percent
No	139	71%
Not sure	31	16%
Yes	25	13%

When estimating in-school usage, about one-third (36%) of teachers believed that none of their students used AI tools. However, the remaining two-thirds (64%) observed that at least some students were engaging with AI tools—one in 10 (10%) estimated that between one-third and two-thirds of students use them, while about half (49%) indicated that less than one-third of students do. Teachers who were more interested in generative AI estimated that a significantly higher proportion of their students were using AI tools to support learning at school compared to their less-interested peers (p = 1.66e-2). This may be because their schools were also more likely to provide tools for student use or because these teachers had greater awareness of AI tools and were more likely to recognise student use when it occurred.

TABLE 14: **What proportion of your students do you think are using AI tools to support their learning at school? (n = 194)**

Response	Count	Percent
More than two-thirds	9	5%
One-third to two-thirds	19	10%
Less than one-third	96	49%
None at all	70	36%

For at-home usage, about a quarter (28%) of teachers believed none of their students used AI tools at home to support their learning, with nearly three-quarters (72%) estimating at least some student use. More than half (53%) estimated this to be less than one-third of their students, while about one in six (16%) believed that one-third to two-thirds of their students are using AI at home.

TABLE 15: **What proportion of your students do you think are using AI tools to support their learning at home? (n = 191)**

Response	Count	Percent
More than two-thirds	5	3%
One-third to two-thirds	30	16%
Less than one-third	102	53%
None at all	54	28%

Thirty-eight percent of teachers reported that their school IT systems block student access to some unapproved AI tools. However, a majority (52%) were unsure if such measures were in place, with one in 10 (10%) believing that no blocking occurred. Teachers who showed greater interest in generative AI were significantly more likely to report that their school's IT systems blocked student access to certain unapproved AI tools (p = 1.66e-2).

TABLE 16: **Does your school IT system block student access to some unapproved AI tools? (n = 197)**

Response	Count	Percent
Yes	74	38%
No	20	10%
Not sure	103	52%

Those teachers whose schools blocked student access to some AI tools were asked their opinion of the effectiveness of blocking. While 41% of teachers (combining those who strongly agreed and agreed) believed that blocking is effective, 32% disagreed, and 26% remained neutral.

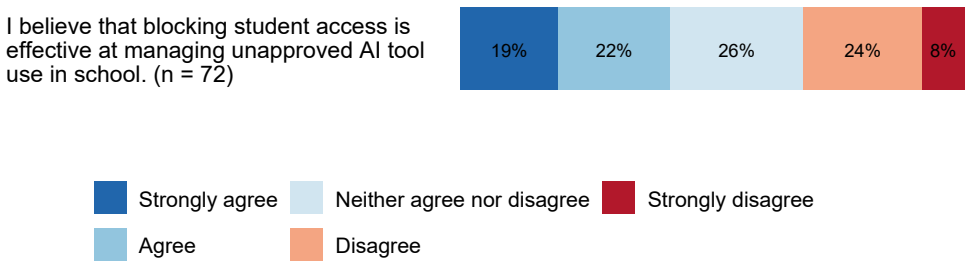

FIGURE 2: **Teachers' opinion on managing unapproved AI tools' use in school**

Even though most primary schools do not formally provide AI tools for student use, a strong majority of surveyed teachers observed that some of their primary school students are engaging with these technologies both in school and at home. Given the young age of the students, these results suggest a need for clear policy development and additional student support systems to ensure the safe and effective use of AI tools in primary education.

Insights on student AI use

More than two-thirds of teachers (68%) expressed concern that students may become overly reliant on AI tools, while only a few (11%) disagreed (Figure 3). Similarly, more than half (57%) of respondents were concerned that AI might undermine the development of foundational skills, with only one in five (21%) disagreeing.

Teachers who expressed more interest in generative AI were significantly more likely to agree that AI tools positively impacted student learning outcomes (p = 1.20e-2) and that AI can enhance learning experiences (p = 3.51e-2). They were also less concerned than their peers that AI tools could potentially undermine students' ability to develop foundational skills (p = 8.90e-3).

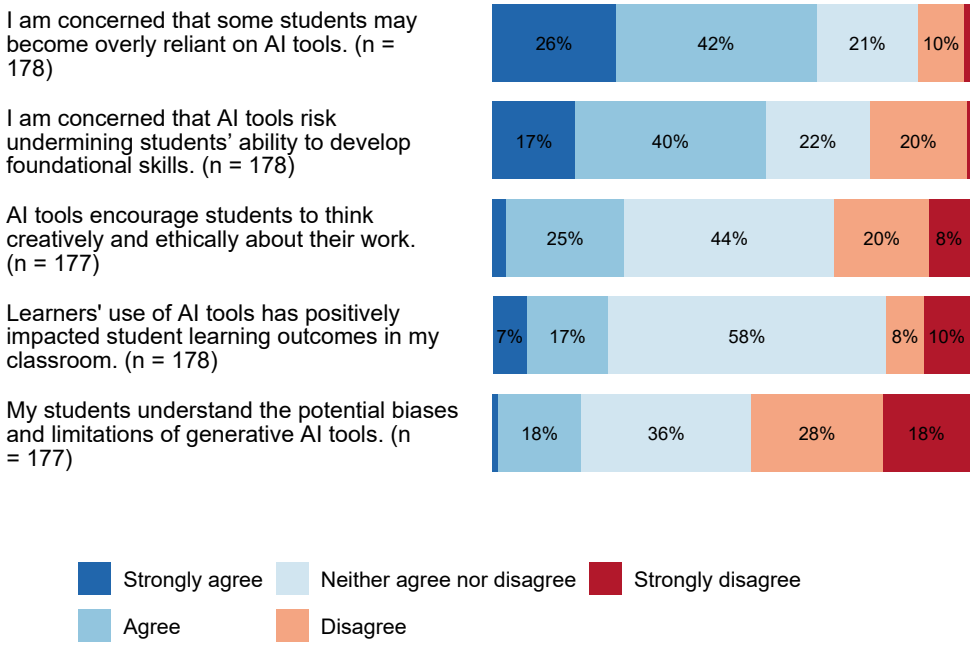

FIGURE 3: **Teachers' insights on students' AI use**

When it comes to the potential of AI to foster creative and ethical thinking, responses were more mixed. Only about a quarter (28%) of teachers agreed that AI tools encourage students to think creatively and ethically about their work, while an equal proportion disagreed. The nearly half (44%) of responses that were neutral suggest many have not yet made up their minds about the role of generative AI in this space.

In terms of classroom impact, just a quarter (24%) of teachers believed that student use of AI tools has positively affected learning outcomes. Most teachers (58%) remained neutral, suggesting that the effects of generative AI tools on academic performance are either subtle or still emerging.

Another area of concern is digital literacy. Only a minority of surveyed teachers (19%) agreed that their students understand the potential biases and limitations of generative AI tools. Nearly half of the respondents (46%) disagreed with this notion, further suggesting there is a need for more guidance to improve students' awareness of AI's limitations and potential pitfalls.

Taken together, these insights suggest a need to embed generative AI use within an educational framework. Teachers who already experiment with generative tools see clear advantages. However, even in this AI-interested group, concerns about over-reliance and limited digital literacy are prevalent. We believe that this mix of optimism and caution has several implications for the primary school sector. There is a need for an AI-aware curriculum that assumes AI use and helps it be integrated in a proactive manner. There is also need for professional learning that equips teachers to model critical and ethical AI use. Finally, digital-literacy programmes for learners are needed to help students understand when it is okay to use generative AI and how to use it in ways that enable rather than impede their learning.

Student use of inaccurate AI information

When asked whether they have observed inaccuracies in information generated by their students using AI, one-third (32%) of primary teachers responded affirmatively and more (41%) were unsure. It seems likely that some of the uncertainty expressed here may reflect teacher uncertainty about when students are using generative AI. For example, it may be difficult for a teacher to tell whether a student is wrong because an LLM provided them with misleading information or whether they are wrong for other, more traditional reasons.

TABLE 17: **Whether teachers have observed inaccuracies in information their students have created with generative AI tools (n = 180)**

Response	Count	Percent
Yes	58	32%
No	48	27%
Not sure	74	41%

Teachers who responded yes to the question above were invited to provide examples, and 24 teachers responded. We identified four main themes in the examples provided: accuracy issues (9 responses); over-reliance on AI (7); Aotearoa New Zealand context (6); and issues with prompts and language (2).

Regarding accuracy, one teacher commented that "If you don't have subject knowledge, you cannot spot mistakes, delusions and false assumptions." Other teachers indicated that their students were, "misunderstanding information" and providing "incorrect facts" sourced with AI.

There were also worries about an over-reliance on AI. One respondent commented, "Students have given the AI the essay question and copied the whole response without even reading it (including sentences when the AI refers to itself as an LLM)."

Some responses underscore the difficulties in ensuring that AI-generated content is appropriate for New Zealand's local cultural and curricular expectations. One teacher noted that "some content does not reflect New Zealand or te ao Māori correctly and needs to be thoroughly checked and cross referenced". Another pointed out that "Image-generation wasn't accurate, e.g. if you try to generate a 'Pacific Islander' or 'Native', it will generate an American Indian person."

The findings in this section further underscore the importance of implementing comprehensive digital literacy programmes that include generative AI and establishing clear guidelines and support for students to ensure that, if AI is used by younger students, it is used safely and effectively.

6. Culture, ethics, equity, and environment

Culturally responsive teaching

This set of questions examined how respondents are leveraging AI tools to enrich culturally responsive teaching and support Indigenous learning in Aotearoa New Zealand.

Among the respondents to this question block (n = 172), four in 10 (40%) of respondents used generative AI tools to create lesson plans that explore other cultures, and roughly one-third used AI to develop resources that reflect the cultural backgrounds of their students (32%) or the diverse cultural context of Aotearoa New Zealand (31%). Some respondents were incorporating AI to support their own learning (25%) and teaching (23%) of te reo Māori, as well as to enhance their understanding of tikanga or mātauranga Māori (21%). Although three in 10 (30%) reported not using AI for any of these culturally responsive purposes, a majority (70%) of respondents are using generative AI tools to support them in at least one culturally responsive teaching activity.

Teachers who expressed greater interest in generative AI reported significantly greater use of AI tools to support their culturally responsive teaching. They were more likely than their peers to use generative AI for creating lessons that explore other cultures ($p < 0.0e-8$), supporting their teaching of te reo Māori ($p = 8.00e-5$), assisting their own learning of te reo Māori ($p = 2.67e-4$), and deepening their understanding of tikanga or mātauranga Māori ($p < 0.0e-8$). One likely explanation for these results is that AI tools provide a way for teachers to easily incorporate elements of other cultures in a more accurate way than they would be able to do on their own without additional support.

Māori respondents reported being more likely than their non-Māori peers to use generative AI tools to support their teaching of te reo Māori ($p = 3.21e-2$) and tikanga or mātauranga Māori ($p = 3.21e-2$).

TABLE 18: **Culturally responsive tasks teachers use AI tools to assist with (n = 172)**

Response	Count	Percent
Creating lesson plans that explore other cultures	69	40%
Creating resources that reflect the cultural backgrounds of your students	55	32%
Creating resources that reflect the diverse cultural context of Aotearoa New Zealand	53	31%
Supporting your own learning of te reo Māori	43	25%
Supporting your teaching of te reo Māori	39	23%
Enhancing your understanding of tikanga or mātauranga Māori	36	21%
Supporting your teaching of Pacific languages and cultures	18	10%
None of the above	52	30%

The evidence here suggests that many primary school kaiako are already experimenting with generative AI to weave te reo Māori, tikanga, and other cultural perspectives into their everyday teaching. The high use of generative AI for culturally responsive teaching, especially among Māori teachers, suggests a strong demand for AI support to generate and possibly also provide quality assurance for diverse, customised cultural content. We feel that scaling this will require guidance and professional learning co-designed with iwi and Pacific communities so that culturally sustaining pedagogy drives, rather than follows, AI integration across Aotearoa's primary classrooms.

Identifying inaccuracies and bias

Only teachers who reported using AI for supporting te reo Māori or enhancing their understanding of tikanga and mātauranga Māori (65 teachers) were asked the next block of questions about generative AI and te reo Māori. Within this subgroup, a majority (60%) of respondents agreed that the AI tools they have used do not always provide accurate information about te reo Māori. While more than four in 10 (42%) agreed that using AI tools has improved their ability to incorporate te reo Māori into their teaching, a similar proportion were neutral (45%) and a minority (14%) of respondents disagreed. When it comes to detecting te reo Māori language inaccuracies, half (51%) of surveyed teachers did not feel confident in their ability to identify errors, while about a quarter (27%) did feel confident.

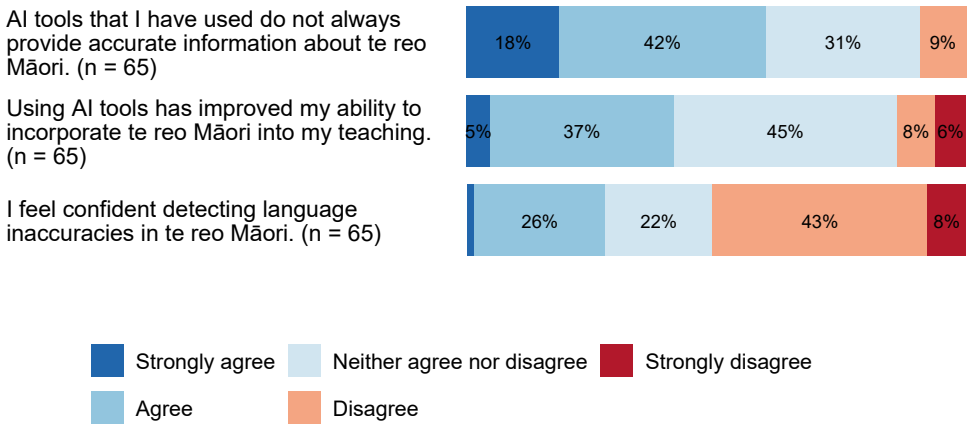

FIGURE 4: **Teachers' views on using AI to support teaching te reo Māori**

Turning to broader cultural issues, about four in 10 (42%) agreed that they feel confident in identifying cultural biases or inaccuracies in AI-generated materials, while one-fifth (20%) disagreed, and more than a third (38%) gave a neutral response. Similarly, more than a third (37%) agreed that AI tools have helped them support students from diverse cultural backgrounds; nearly half (46%) were neutral about this benefit. One-third (33%) of respondents have observed cultural biases or inaccuracies in AI-generated content, and a third (32%) also expressed some concern that reliance on AI tools might contribute to the erosion of cultural traditions or values, with many respondents (38–54%) choosing a neutral response for all items in this question block.

Teachers who were more interested in generative AI were significantly more likely to have observed cultural biases or inaccuracies in AI-generated content ($p = 4.02e\text{-}2$) and felt more confident identifying these biases ($p = 8.67e\text{-}3$). They also expressed greater concern that reliance on AI could potentially erode cultural traditions or values ($p = 3.34e\text{-}2$), and that unequal access to AI tools among students might exacerbate inequities ($p = 4.27e\text{-}2$).

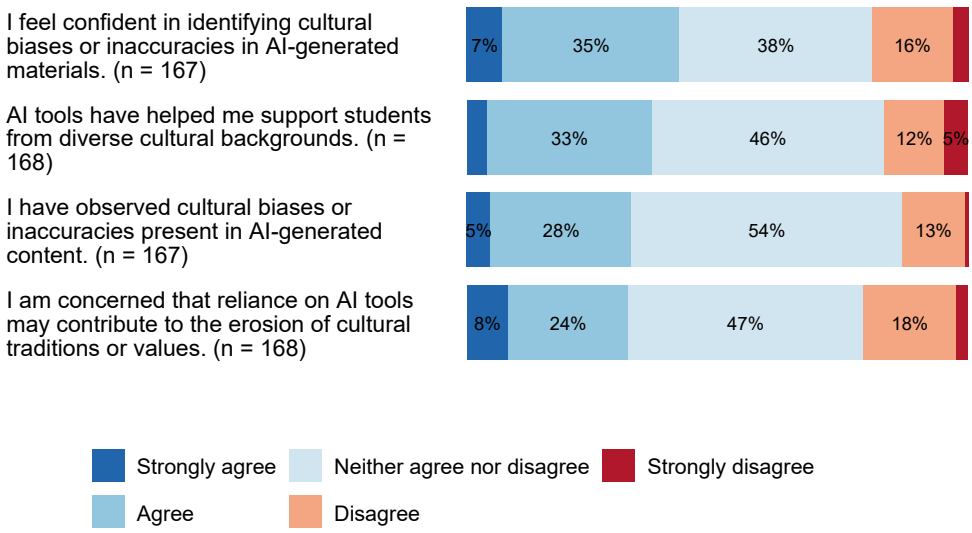

FIGURE 5: **Culturally responsive teaching**

The findings suggest that, while many teachers are actively using AI tools to enhance their ability to incorporate te reo Māori into the classroom, they perceive limitations in the current tools available to them and are also uncertain about their ability to identify errors when made by generative AI tools. This suggests a need for tailored AI solutions that are more suited to the Aotearoa New Zealand context as well as for more engagement by the primary education sector or the Ministry of Education with AI tool providers, both domestically and internationally, about specific concerns. We also feel that the results in this section further strengthen the case made in the previous section for customised PLD for teachers, ideally co-designed with iwi and Pacific communities, focusing on how to best use existing LLMs for culturally responsive teaching purposes.

Over the past 2 years, LLM developers have had considerable success in reducing model bias and hallucinations (Tao et al., 2024; Vectara, 2025). We suspect that newer (and therefore typically paid) models are also less culturally biased and may continue to be so in the coming years as development of LLMs progresses. For this reason, the need for accurate, culturally safe tools to support culturally responsive teaching further strengthens the argument made elsewhere in this report in favour of providing primary teachers with access to deliberately chosen, premium generative AI tools.

Ethics, equity, environment, and AI

This section explored bigger picture questions about ethics, equity, and the environment that are related to generative AI use.

When asked if they were concerned that some students may have less access to AI tools than others, more (31%) teachers agreed than disagreed (18%). However, a majority (51%) responded neutrally, possibly indicating that they had not thought deeply about this issue or were thinking about free generative AI tools (which are widely accessible and used by more responding teachers) rather than about premium versions or device availability. A similar response pattern was observed to the next three questions. More agreed that students use AI tools differently based on socioeconomic

background (30%), gender (24%), and ethnicity (21%) than disagreed, but in all three cases approximately two-thirds of respondents answered neutrally.

Only one-fifth (20%) of responding teachers felt that their students were aware of the potential biases and limitations of AI tools. Almost twice as many (39%) disagreed, suggesting that primary school classes would likely benefit from more learning opportunities in this area.

Teachers who were more interested in generative AI than their peers reported significantly greater student awareness of the potential biases and limitations of AI tools ($p = 5.13e\text{-}3$). One possible interpretation of this result is that teacher interest and exposure may support teaching of AI critical literacy to students.

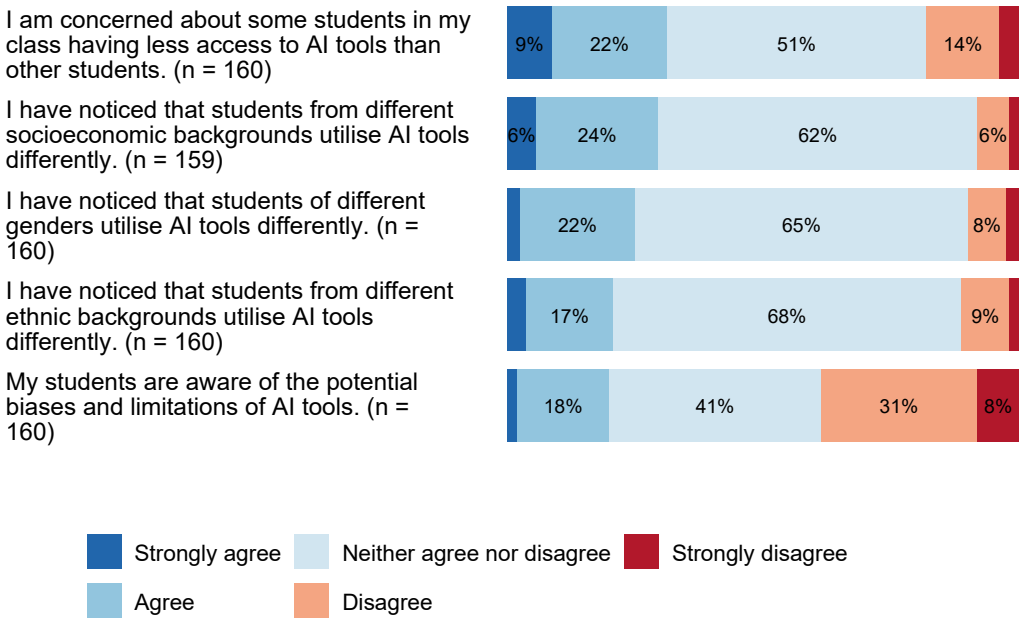

FIGURE 6: **AI, ethics, and equity**

Twenty-five percent of teachers agreed they were concerned about the environmental impact of AI tools (e.g., carbon footprint and energy consumption), a greater number (35%) disagreed, and 40% neither agreed nor disagreed. Similarly, only about one in five (22%) agree that the benefits of AI in education outweigh the environmental costs, in comparison with a similar proportion (18%) who disagreed and three-fifths (60%) who were neutral. Only one-fifth (21%) of respondents considered environmental sustainability when choosing AI tools, with about two-fifths (37%) disagreeing and another two-fifths (42%) neither agreeing nor disagreeing. These responses suggest that teachers may be uncertain about the environmental impacts of AI and how these should be weighed against potential benefits.

Teachers who were more interested in generative AI were more likely to agree that the educational benefits of AI outweigh its environmental costs ($p = 2.08e\text{-}2$).

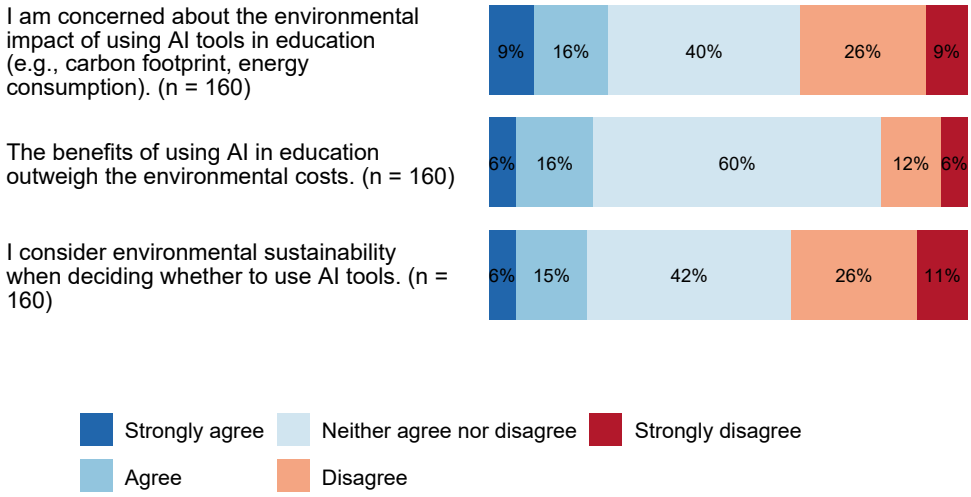

FIGURE 7: **AI and the environment**

Collectively, these findings indicate some teacher concern about ethical, equity, and environmental issues associated with the use of generative AI. However, at least among this group of disproportionately interested teachers, those concerned tend to be in the minority, with the largest group of teachers responding neutrally. Some of this may reflect uncertainty about how the energy needs of AI tools will actually be met, as there is uncertainty about the amount of energy that will be needed and how it will be sourced globally (International Energy Agency [IEA], 2025).

The one place where there was a clear signal of relative teacher concern, though this was still expressed by only a minority of respondents, was student awareness of the biases and limitations of AI tools. This may suggest a need for generative artificial intelligence to be directly addressed in primary students' technology education.

7. Policy, training, and future hopes

Policy and guidelines

We asked about the extent to which schools have established policies for AI use among teachers and students, as well as the integration of New Zealand's cultural context into these policies. We also asked about teachers' engagement with Ministry of Education resources on generative AI.

Only a minority (8%) of respondents reported that their school has a policy governing teachers' use of AI tools, while about a quarter (27%) indicated that a policy was currently in development. In contrast, nearly half (47%) said there was no such policy at their school and one in five (19%) were unsure. This suggests that policy development in New Zealand primary schools is still in early stages.

TABLE 19: **Whether school has a policy around teachers' use of AI (n = 160)**

Response	Count	Percent
Yes	12	8%
In development	43	27%
No	75	47%
I don't know	30	19%

A slightly higher proportion (14%) indicated that their school has a policy governing student AI use, with one in five (21%) reporting that a policy was in development. However, nearly half (44%) report that their schools did not have a policy governing student use in place, with another one in five (21%) uncertain.

TABLE 20: **Whether school has a policy around students' use of AI (n = 160)**

Response	Count	Percent
Yes	23	14%
In development	33	21%
No	70	44%
I don't know	34	21%

Those respondents who indicated that their schools either had a policy in place or were developing one (for either students, teachers, or both) were asked follow-up questions about whether their school has considered Te Tiriti o Waitangi and Māori data sovereignty when designing their policies. When asked about Te Tiriti, most (65%) respondents whose schools either had or were developing a policy selected "I don't know". Amongst those with enough context to be able to give an answer, roughly three times (28%) as many teachers agreed that Te Tiriti had been considered as did not (8%).

A similar pattern was observed when asking about Māori data sovereignty, with most (62%) unsure. Among those with enough context to be able to give an answer, more (24%) agreed that Māori data sovereignty had been considered than disagreed (14%).

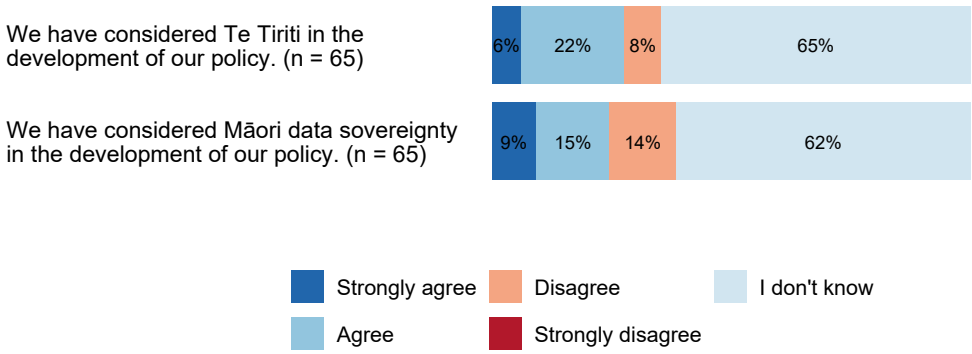

FIGURE 8: **Te Tiriti and Māori data sovereignty in school AI policy**

We asked one question to evaluate teachers' views about the Ministry of Education's webpage on Generative AI as a resource for supporting AI tool use in the classroom. Most (63%) teachers who answered this question reported that they had not viewed the Ministry webpage. Only a small minority of teachers agreed that they found it useful (with 2% strongly agreeing and 6% agreeing), while a similar number disagreed (3% disagreeing and 3% strongly disagreeing), and a larger group (22%) responded neutrally.

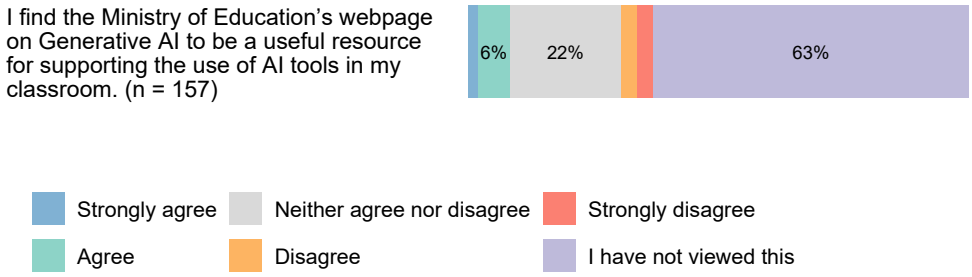

FIGURE 9: **Ministry of Education website awareness**

Our findings suggest that formal AI policies in New Zealand primary schools are still in an early stage, with most primary teachers uncertain about their existence or content, even among our AI-interested sample. It seems likely that schools would benefit from more support and guidance about how to implement generative AI policies. The low engagement with the Ministry of Education's webpage on Generative AI underscores the need for better dissemination and communication of resources, particularly if the Ministry of Education moves more strongly into the guidance, curriculum, or PLD spaces for generative AI.

Training and support needs

A large majority of teachers (85% combined) indicated that they would benefit from additional training or support to use AI tools effectively. Although three in five (61%) expressed confidence in integrating AI into their classroom practices, there remains a notable portion who are uncertain

(19%) or lack confidence (20%). Unsurprisingly, teachers more interested in generative AI expressed significantly greater confidence in integrating AI tools into their classroom practices (p = 3.08e-4).

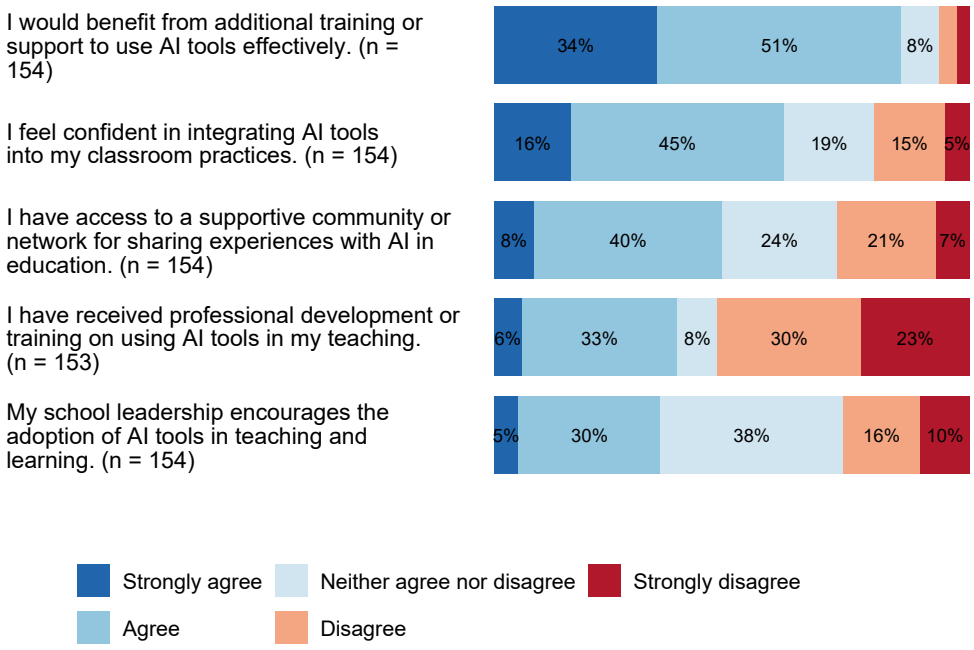

FIGURE 10: **Training and support needs**

Less than half the respondents (48%) reported having access to a supportive community or network for sharing experiences with AI in education. Moreover, fewer than one in four (39%) have received any professional development or training on using AI tools.

Support from school leadership appears to be mixed. Only about one-third (35%) of teachers felt that their school leadership actively encouraged the adoption of AI tools in teaching and learning, with slightly more (38%) remaining neutral, and about a quarter (26%) disagreeing.

Together, these results point to a gap between teachers' willingness to use generative AI tools and the system-level supports currently available. Overall, these insights suggest a need for enhanced teacher training and support as well as for leadership to guide and inform AI integration in New Zealand's primary education sector. We believe that leadership should focus on providing practical guidance by offering advice on how to use generative AI tools within the ethical and equity context for their schools.

Future hopes

Surveyed teachers appeared hopeful about the future role of AI in primary education. More than three-quarters (78%) of responding teachers had indicated some level of agreement that AI can help address diverse learning needs. Nearly as many (75%) anticipated that AI would reduce their workload. Slightly fewer (70%) agreed that AI will enhance student engagement over the next 5 years.

Teachers also indicated areas of concern. For example, approximately two-thirds (68%) expressed worry that AI reliance might reduce students' critical thinking skills and nearly two-thirds (63%) also believed AI may replace aspects of their teaching role. Two-thirds (66%) also indicated they would

like to see more AI use across their school. However, nearly half of surveyed teachers (47%) felt overwhelmed by the pace of AI development. Interestingly, nearly four in 10 (38%) disagreed with this sentiment. Environmental considerations prompted the greatest uncertainty—while four in 10 teachers (41%) believed current environmental challenges are likely temporary, a similar number expressing neither agreement nor disagreement (44%).

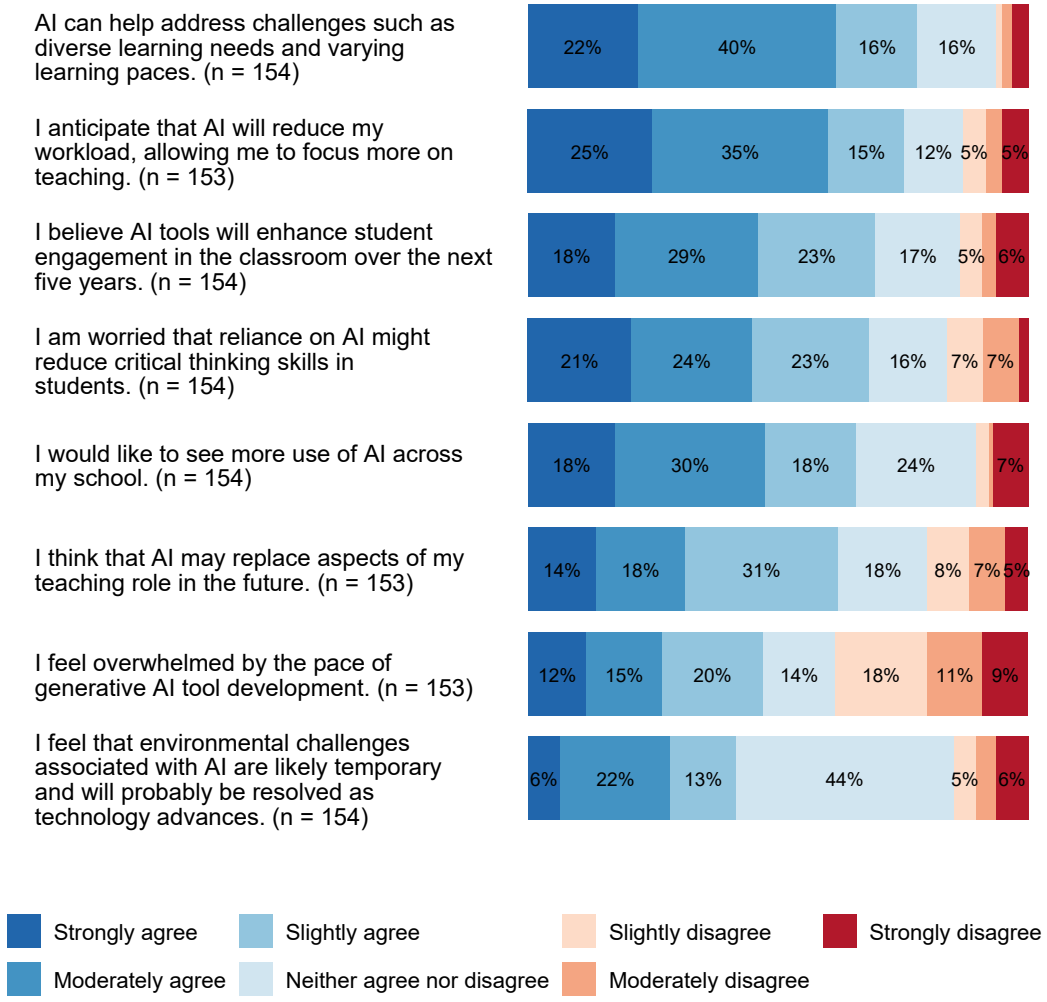

FIGURE 11: **Thoughts about the future of AI in education**

Those teachers who were more interested in generative AI showed significantly stronger beliefs that AI will enhance student engagement in the coming years ($p = 1.33e-3$), reduce workload allowing greater teaching focus ($p = 4.27e-2$), and help address diverse learning needs ($p = 3.73e-4$). They also expressed greater interest in broader school-wide adoption of AI ($p = 8.89e-4$). They simultaneously felt less overwhelmed by the rapid pace of generative AI developments ($p = 2.13e-2$) and had reduced (though still considerable) concern about potential reductions in students' critical thinking skills ($p = 7.97e-3$).

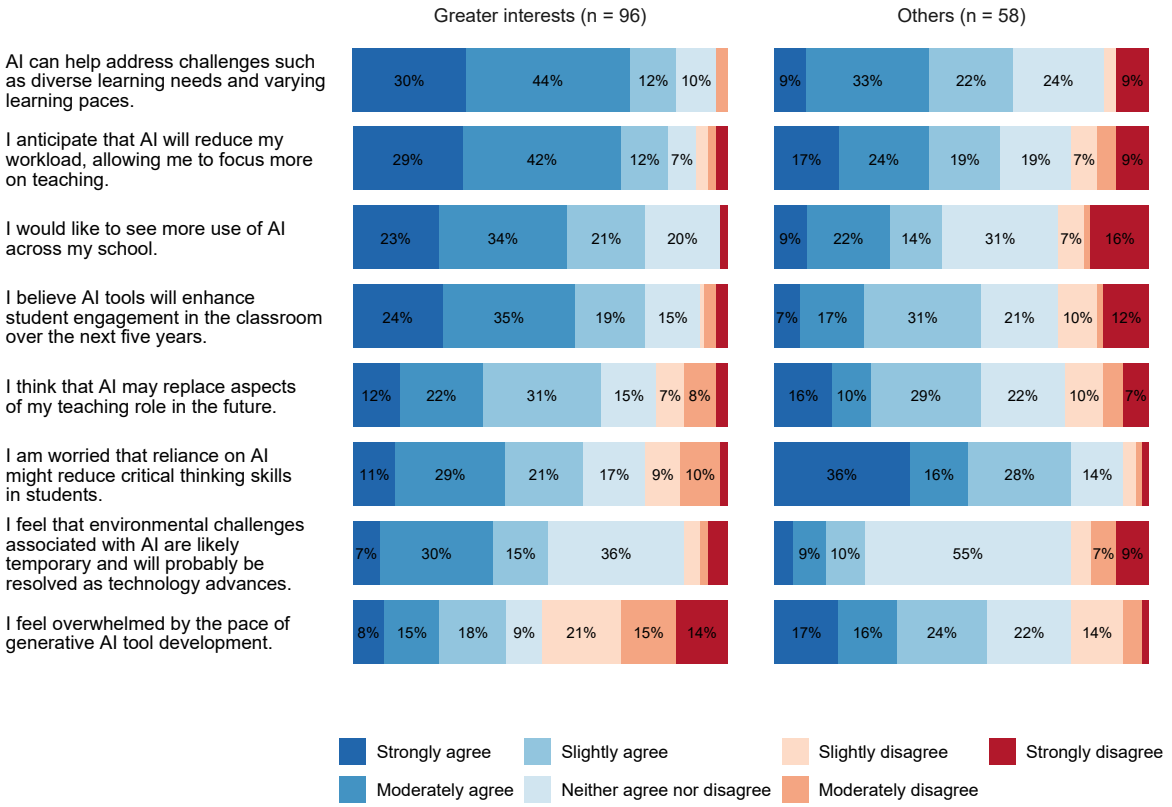

FIGURE 12: **Potential for AI in the classroom**

Teachers who are more interested in generative AI than their peers may believe more strongly that it can cut workloads, boost student engagement, and meet diverse learning needs because they are already experiencing more success at using generative AI to do these things now. We feel that this highlights the need to include current teacher experiences with generative AI into any emerging policy landscape.

Most promising potential applications for AI

Teachers were asked to share their views on the most promising application of AI in primary education, and their 55 responses were coded into six categories—"workload and saving time" (18 references), "differentiation and personalisation" (15), "planning and resource creation" (12), "AI literacy and ethics" (4), "creativity and innovation" (3), and "problem solving and real-world applications" (3).

Eighteen teachers focused on AI's potential to reduce teacher workload, save time, and allow educators to focus more on quality classroom interaction. For instance, one teacher explained, "I believe that AI has huge potential in supporting teachers to design and plan lessons and save time in the process", while another noted that the ability to provide instant feedback and automate routine tasks "gives teachers back their time".

Fifteen responses emphasised AI's potential capacity to tailor learning experiences to the diverse needs of students. One respondent appreciated that "I can have a lesson plan and then utilise AI to quickly individualise the whole lesson to interest-based options for the students to pick", and another

highlighted the potential for creating "individualised, differentiated programmes designed to meet every need in my classroom".

Twelve responses discussed planning and resource creation. Educators expressed enthusiasm about AI's ability to reduce preparation time while enhancing the quality of instructional materials. For example: "The ability to 'produce' a lesson that can then be differentiated for learning AND language needs quickly and relatively accurately."

Four responses highlighted the importance of integrating ethical understanding and AI literacy into education. For example: "Teach how AI can be used to enhance people's abilities, but we need to actively teach ethics and bias."

Three responses referenced AI's potential use for creativity and innovation. For example, one teacher noted that AI is "good for modification and accommodation, producing ideas, creativity, efficiency, save time, focus on teaching & diversity". Three other responses discussed using AI for problem-solving and real-world applications. As an example of this theme: "[AI could enable] students developing AI utilisation skills for solving environmental and social problems."

Biggest challenges ahead

Teachers were also asked about what they saw as the biggest challenges that AI will pose for primary teaching and learning. Forty-seven responses were coded. These were organised into seven categories, with "Over-reliance" (11 references) being the most frequent, followed by "Teacher knowledge and PLD" (9), "Ethical and critical use of AI" (8), "Accuracy and quality of AI" (7), "Impact on teacher roles" (5), "Parental and societal perceptions" (4), and "Access" (3).

Eleven teachers expressed apprehension about over-reliance on AI. For example, one had expressed concern about "students not gaining a foundation … relying on it to create content that they don't actually understand" and another was worried about "cheating, lack of deep thinking and originality".

The second most prominent concern centred on teacher knowledge and PLD. Several teachers stressed the importance of "being able to keep up with the progress and ensuring teachers are upskilling in this area", and one teacher pointed out that "if people use AI to just ask for a lesson on poetry … yes they will get a lesson, but it will lack meaning and relevance".

Eight references highlighted ethical and critical use of AI, focusing on questions of bias, plagiarism, and the potential erosion of critical thinking skills. One respondent observed that "responsibly teaching students to use AI ethically and critically … would be catastrophic if not done properly", while another worried that "critical thinking will deteriorate".

Teachers also voiced concerns about accuracy and quality (seven references). One person explained that "sifting through accuracies with what is being generated" can be difficult, as AI may "make up" references when asked to provide them. Another cautioned against trusting AI-generated lesson plans without verifying the "quality of the resources generated".

In terms of impact on teacher roles (five responses), some teachers predicted that AI could shift practice toward "more relationship and social facilitator" tasks, while others worried about the potential for "robots in front of children" if AI were to replace essential human interactions. One respondent observed that "those not on board at this stage already have a huge amount to negotiate to 'catch up'", reflecting a sense that AI's rapid development might outpace educators' capacity to adapt their professional identities and classroom approaches.

Four responses mentioned parental, teacher, or societal perceptions, referring to “negative stereotypes” or “Luddite teachers freaking out”. One teacher described the challenge of “changing the mindsets of some people who think that the use of AI is ‘cheating’”, suggesting that public perception of AI’s educational value remains uneven. Such attitudes may hinder constructive adoption of AI tools and lead to uncertainty about their legitimacy in schools.

Finally, three responses addressed issues of access. One teacher indicated that “we do not let our students use AI tools … we are not at that stage in our own professional development yet”, while another raised the problem of “if tools are just used or ignored and not used without careful consideration and instruction”.

Overall, the open-ended findings illustrate a cautiously optimistic outlook among our disproportionately interested teachers with respect to the future of AI in primary education. While a strong majority believe that AI holds promise for addressing challenges such as diverse learning needs, reducing workload, and boosting student engagement, there is also considerable concern about potential drawbacks, including a possible reduction in students’ critical thinking skills and shifts in traditional teaching roles. These insights suggest that the effective integration of AI in New Zealand primary classrooms will likely depend not only on leveraging its benefits but also on professional development and balanced support systems that ensure technology enhances rather than diminishes the quality of teaching and learning.

8. Student perspectives

Student survey data collection and analysis

Teachers who volunteered their classes and were able to complete the principal, whānau, and student consent processes received individualised survey links for their classes. Teachers invited their students to take the survey during school time. Students and their whānau were informed that all participation was voluntary and that they could skip any questions they didn't want to answer. This was reinforced in the introduction to the survey itself. The overall completion rate of the student survey across all four participating schools was 85%, as most students elected to complete all questions in the survey.

Student data are presented on a school-by-school basis rather than being aggregated across schools. This approach was chosen to preserve the unique context of each participating school and to provide more meaningful, localised insights. Given the variation in student age and community demographics, individual case analysis offers a more nuanced understanding of students' experiences and perspectives.

Given the small number of schools that took place in the student survey, the results here should be considered exploratory and are offered in part in the hope that they help inform more comprehensive research into primary student generative AI use.

Case study schools

Four teachers indicated that they wished to have their schools participate and were able to successfully gain consent for participation. We received a total of 147 responses from the four schools with 22 responses from Case A, 82 responses from Case B, 24 responses from Case C, and 19 responses from Case D. For three schools (A, C, and D in the table below), these responses were all from a single class per school. For the final school (B), multiple classes provided responses. The details of the four schools and their characteristics are shown in Table 21.

TABLE 21: **Case study schools**

	School type	School size	Year level	Region	EQI group	Gender of students
Case A	Contributing	101–300	Year 5	Auckland	Fewer barriers	Co-educational
Case B	Intermediate	501–1,000	Years 7 and 8	Auckland	Moderate barriers	Co-educational
Case C	Full primary	501–1,000	Years 7 and 8	Canterbury	Fewer barriers	Co-educational
Case D	Full primary	101–300	Year 8	South Island	Fewer barriers	Girls' school

Respondents from School A were a class of Year 5 students. This school is a co-educational contributing school located in a major urban area in the Auckland region. The school size is between 101–300 students and the school is from the fewer social barriers EQI group. Little additional information was available about AI practice from this school as no teachers from this school provided data in this portion of the teacher survey.

School B is a co-educational, urban, intermediate school in the Auckland region. Respondents from this school were a mix of Year 7 and Year 8 students from more than one class. The school has between 501–1,000 students and their EQI is in the moderate social barriers group. Two teachers of students in this school responded to the survey and chose to identify their school. Their answers about their school were in slight conflict, with one indicating that the school did and the other that it did not have policies governing student and teacher use of generative AI. One estimated that between one-third and two-thirds of their students used generative AI and the other believed that less than one-third did. As student respondents from this school came from more than one class, it is likely that they have different classroom experiences about generative AI, though within the same overarching school framework.

School C is a co-educational full primary school located in the Canterbury region with between 501–1,000 students. Respondents from this school were a mix of Year 7 and Year 8 students from a single class. This school is from the fewer social barriers EQI group. Their teacher uses AI weekly and estimated that less than one-third of their students used AI at home and at school. According to this teacher, School C has an AI policy governing student and teacher use.

School D is a state-integrated full primary school in the South Island focused on girls' education from Year 1 to Year 8. The EQI group of this school is the fewer barriers group. The school has a total roll between 101–300. Respondents from this school were all Year 8 students. The corresponding teacher uses generative AI tools weekly, estimated that less than one-third of their students use generative AI to support their schoolwork at home and at school, and didn't know if their school had any AI policies.

Demographic and background

The gender composition of student respondents varied across the four case study schools. Cases A, B, and C showed relatively balanced representation of girls and boys, though girls slightly outnumbered boys in each.

TABLE 22: **Gender distribution of responding students by case**

Case	Girls	Boys	Another gender
Case A	59%	41%	–
Case B	49%	47%	4%
Case C	54%	42%	4%
Case D	100%	–	–

AI awareness and understanding

Students were asked whether they had ever heard of AI. If so, they were asked where they had heard about it and were allowed to select all the choices that applied. The small number of students who had never heard of AI were skipped to the end of the survey to avoid burdening them with many questions that might not have had meaning to them.

Across all four schools, 90% of students reported having heard of AI, with the highest awareness among students from Case D (100%) and lowest from Case A (73%), which was comprised of younger Year 5 students. Cases B and C also had high awareness, with 91% and 96% of student respondents having heard of AI respectively.

Students reported having heard about AI from a variety of sources. The youngest class (Case A) learnt about it from a mix of school and friends (66%), family/whānau (38%) rather than digital channels (24%). Older students from the other classes most typically learnt about AI from the internet or social media—84% from Case B, 79% from Case C, and 89% from Case D.

TABLE 23: **AI awareness of responding students by case**

	Case A	Case B	Case C	Case D
Have heard about AI	73%	91%	96%	100%
Heard about AI from family or whānau	38%	40%	33%	21%
Heard about AI from school	33%	40%	58%	37%
Heard about AI from friends	33%	33%	29%	21%
Heard about AI from internet or social media	24%	84%	79%	89%

Overall, nine in 10 participating ākonga had already heard about AI, with awareness rising from about three-quarters of the younger Year 5 cohort in Case A to virtually all students in Cases B–D. The influences they named shifted with age. The younger learners most often heard about AI through school, friends, and whānau, while their older peers overwhelmingly encountered it online or via social media. While tentative due to the small number of schools, the data suggest widespread exposure to AI and a shift toward internet-influenced understanding of AI as students progress through the second half of primary school.

AI application usage and exposure

Our research team had concerns that in responding to survey questions, some primary students might not be able to tell generative AI tools apart from other internet software or apps. To mitigate this risk, students were told (in the survey): *"The rest of this survey is about **Generative Artificial Intelligence (AI)**—smart computer programs that can do things for you, like writing stories, answering your questions, or drawing pictures."* Learners were then asked about whether they had used different categories of generative AI tools. Our hope was that this question, following immediately after the definition, would serve to further frame the concept of generative AI for younger learners.

Many responding students reported having used at least some of the categories of generative AI applications, though the exact balance varied from school to school. It is possible that some of this variation was a direct result of the schools themselves introducing some tools to their students (e.g., image generators or coding tools).

In Case A, the most popular category of tool used by students was game and code helpers (38%), possibly suggesting that younger students are more drawn to AI when it's embedded in playful or interactive experiences, though as this is a single class, it may also directly reflect teacher or school influence. In Case B, students favoured "chat helpers" the most (47%). Case C students used "art generators" the most (61%), followed by "chat helpers" (51%). In the all-girls' school (Case D), where reported use was generally lowest across most categories, students' most selected tool was "talking to AI like a friend" (32%), though this was more of a reflection of the lower use of AI for other purposes by these students as approximately one-fifth to one-third of students at all cases indicated that they talked to AI like a friend (19%–32%). In addition, while not the most reported use of AI tools at any school, using AI "writing fixers" was used by students in all four cases (21%–33%).

TABLE 24: **Types of AI applications students use**

Types of AI apps	Case A (n = 21)	Case B (n = 72)	Case C (n = 23)	Case D (n = 19)
Game and Code Helpers: AI that helps you learn coding or make games	38%	22%	9%	0%
Chat Helpers: Tools like ChatGPT that answer questions or help with ideas	33%	47%	57%	21%
Music Makers: Make your own music or sounds (like Mubert)	29%	14%	13%	5%
Writing Fixers: Help with spelling, grammar, or rewriting (like Grammarly)	29%	33%	26%	21%
Talking to AI like it is a friend (like Heeyo, ChatKid)	19%	31%	26%	32%
Art Makers: Create pictures by describing them (like Firefly or DALL E)	10%	28%	61%	11%
None of these	29%	22%	13%	47%

Note: Percentages in columns don't add up to 100% as students were allowed to select more than one.

When asked how frequently they use AI apps, only a minority of surveyed students reported weekly use (14%-21%). Cases A, B, and D had similar use patterns for less than weekly use (38%–47%), and for never using generative AI tools (37%–48%). Case C showed a different pattern, with only about one in 10 (9%) of students reporting that they never used generative AI tools and almost three-quarters (73%) indicating that they used these tools less than once per week. Despite these varied use patterns, more than half of the students surveyed indicated that they used AI apps at least some of the time at all surveyed schools.

TABLE 25: **How often do you use AI apps?**

	Case A (n = 21)	Case B (n = 72)	Case C (n = 23)	Case D (n = 19)
At least once a week	14%	14%	18%	21%
Less than once a week	38%	47%	73%	42%
Never	48%	40%	9%	37%

At all four schools, more students reported using generative AI outside school than at school. The younger students in Case A had the lowest engagement with nearly half reporting that they don't use AI tools. However, even here, more than four in 10 had some usage outside school. Case C had the strongest overall engagement, with majorities of students indicating that they used generative AI tools both inside (61%) and outside school (74%). Cases B and D had similar patterns of usage, with most students (59% and 61%) using generative AI tools outside of school but only a minority using them at school (22% and 17%).

TABLE 26: **Where do you use AI tools? (Select all that apply)**

	Case A (n = 21)	Case B (n = 72)	Case C (n = 23)	Case D (n = 19)
At school	19%	22%	61%	17%
Outside school	43%	59%	74%	61%
I don't use AI tools	48%	30%	17%	33%

We deliberately asked students about non-use in more than one way. This was in part because we weren't sure what framing the teacher would use to present the survey and wanted to encourage learners to think about use from more than one perspective. So, in a few cases, these answers are inconsistent, possibly because some students were coming to better understand the concept of generative AI as they were completing the survey.

We asked the students about 10 specific tasks that they may have used AI to help with. Creating images was the most frequently mentioned activity, ranging from one in four users (25%) for Case D to more than two-thirds (68%) for Case C. Between one-eighth and one-half of users at each school said they asked AI to answer questions "for school or fun" (12%–50%). Checking or fixing writing attracted moderate proportions everywhere (29%–45%). Smaller proportions used AI for idea generation on projects or homework (6%–32%) and for gaming assistance (12%–41%). Talking to AI "like a friend" showed wide variation, from one in eight (12%) at Case A to nearly half (47%) at the all-girls' Case D. Learning about Māori words, stories, or culture was reported by less than a quarter of (7%–24%) of users. Writing stories or poems appeared in less than a third (9%–29%) of responses.

It is important to note that all items were selected by at least some students at all four schools, suggesting that students in this age group are actively exploring generative AI in a variety of ways and that it may be becoming a routine part of the childhoods of many of them. In particular, some

of the activities that received stronger responses (e.g., “To talk to like a friend” or “To help with games I play”) are not obviously school-related and suggest that any direct AI education in schools, particularly from a safety perspective, may need to accommodate a wider dynamic of student use that includes extracurricular AI for potential non-educational purposes.

TABLE 27: **Things students have used AI to help with**

Tasks	Case A (n = 17)	Case B (n = 59)	Case C (n = 22)	Case D (n = 17)
To draw pictures or create art	53%	41%	68%	24%
Answering questions for school or fun	24%	39%	50%	12%
To check or fix my writing	41%	36%	45%	29%
To come up with ideas for school projects or homework	29%	24%	32%	6%
To help with games I play	41%	25%	18%	12%
To talk to like a friend	12%	32%	18%	47%
To learn about other cultures	18%	14%	14%	12%
To learn about Māori words, stories, or culture	18%	7%	9%	24%
To write stories or poems	24%	19%	9%	29%
To help with maths	29%	5%	5%	18%

Across the four cases, more than half of surveyed ākonga reported at least some use of generative AI apps, though regular (weekly) use remained the exception (14%–21%). Engagement was typically higher outside school than within it, and the mix of tools varied by cohort. Case A’s younger learners most often used game or code helpers, while older students in Cases B and C favoured chatbots and art generators. The all-girl cohort in Case D favoured talking to AI like a friend. Notably, every listed application type was reported by at least some students in every case, suggesting that ongoing student exploration is broad in character.

Social environment and influence

We asked two questions to explore the broader environment of AI use which exists around students, asking them whether “other people at my house use AI tools” and whether “some of my friends or classmates use AI tools”.

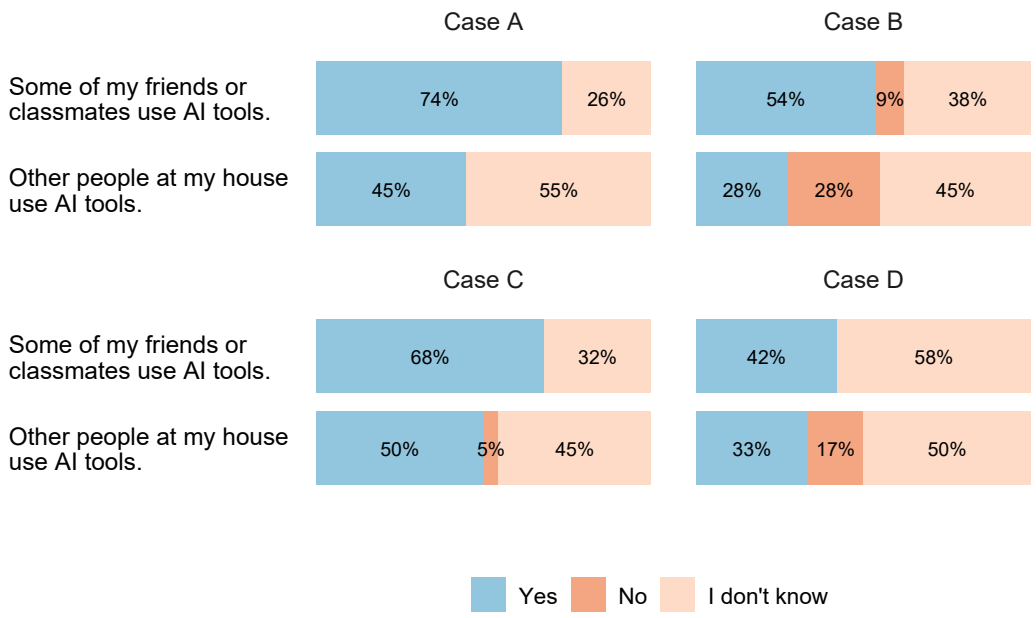

FIGURE 13: **Students' social environment**

Across all cases, the share of students who said that some friends or classmates use AI tools was higher than the share who said the same about people in their household. Peer use ranged from four in 10 (42%) of students for Case D up to three-quarters (74%) for Case A. For household members, the corresponding figures ran from approximately one-quarter (28%) for Case B to half (50%) for Case C. In three of the four cases, students were also more uncertain about household use, with approximately half (45%–55%) of students selecting "I don't know". This supports the conjecture that AI use among this age group is currently being driven more by peer and family influence (in that order) than by schools.

Attitudes toward generative AI and learning

We asked the students a series of questions about their beliefs about the relationship between AI and learning.

Most students in Cases C and D agreed that using AI too much can make it hard for kids to learn on their own (70% and 74%), and a majority in Case B felt the same way (57%). The younger students at Case A did not generally share this concern (38%). However, stated disagreement was low for all cases (9%–22%), and uncertainty was highest in Case A, where nearly half were unsure (48%), suggesting that the youngest respondents did not have firm opinions about this topic.

When asked whether using AI for learning sometimes feels like cheating, majorities in every school agreed. Just over half of students in Cases A and B (57% and 55%) and nearly three-quarters of Cases C and D (70% and 72%) agreed. Relatively few students disagreed (9%–14%), while a larger group was unsure (17%–32%).

Views were less consistent across schools on the statement "I'm better than the grown-ups I know at using AI tools". Only about one-quarter of students in each school agreed (21%–30%). However, the younger students from Case A mostly disagreed (62%), with only about one in eight being unsure

(14%). At the other schools, agreement (21%–30%) and disagreement (22%–30%) were similar, but the largest reported category was "I don't know" (39%–53%).

For all cases, more students agreed that "I think AI tools help kids learn" than disagreed. However, the agree/disagree ratio as well as the magnitude of the effect varied from school to school.

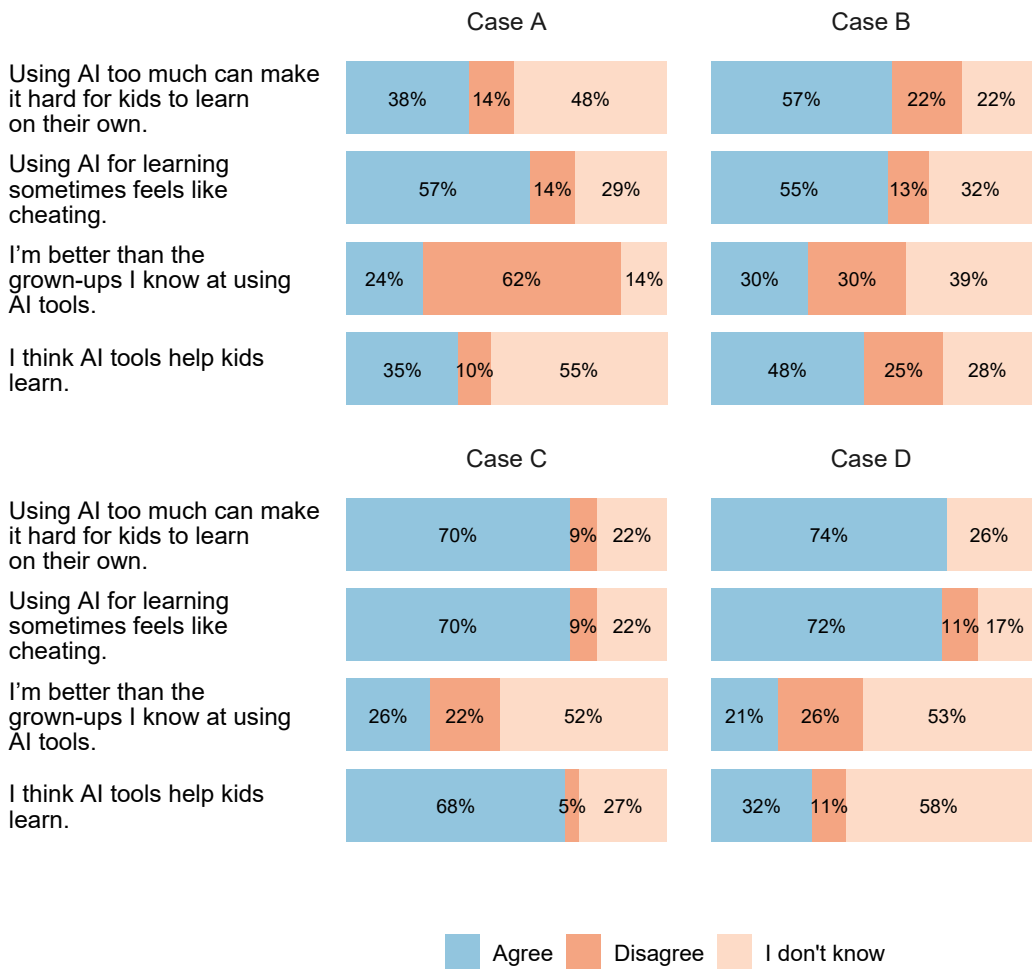

FIGURE 14: **Students' attitudes toward AI**

While these results differ overall from school to school, the widespread agreement by students that "Using AI for learning sometimes feels like cheating" further strengthens the case made elsewhere in this report that guidance for students in this age range is likely needed. Likewise, the moderate to high levels of student agreement found across all schools with "Using AI too much can make it hard for kids to learn on their own" may support concerns raised elsewhere about student use undermining the acquisition of foundation skills (Johnston, 2024). We believe that more research is needed to untangle how younger learners are currently using generative AI to support their learning as well as how best to constructively support their (likely inevitable) use of these tools in a way that enables rather than undermines their learning.

School guidance and support

When asked about whether a grown-up had talked to the students at school about when it's OK to use AI, almost half (48%) from Case C said "Yes"—a higher proportion than in the other cases, where at most one in five (16%–20%) reported such discussions.

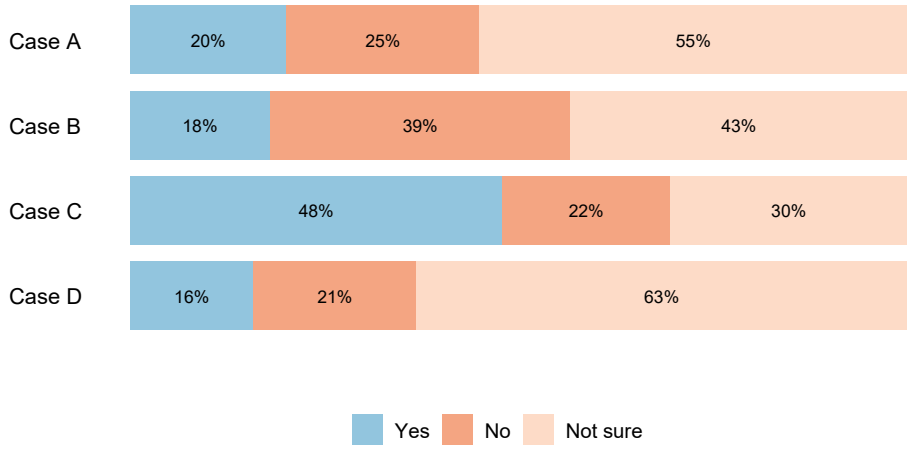

FIGURE 15: **Whether a grown-up has talked to students about when it's OK to use AI at school**

Given learner answers to the previous question, it is perhaps unsurprising that students from Case C also reported the highest level of teacher support, with four in 10 (41%) agreeing that teachers help them use AI tools when needed. This contrasts with lower teacher support in the other schools (15%–21%). Parental support was highest for the youngest students in Case A (40%), with lower levels of response from the other cases (15%–26%).

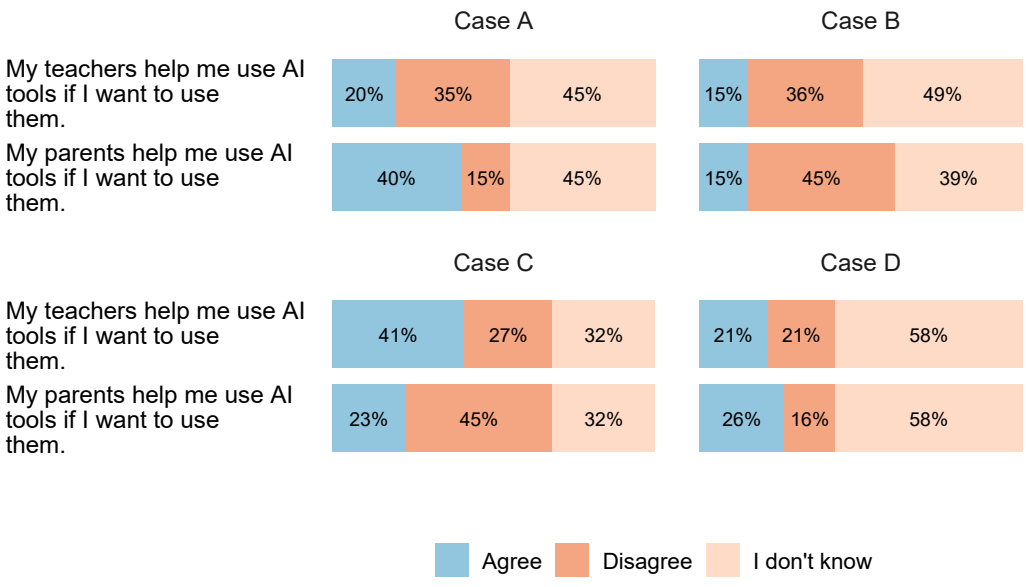

FIGURE 16: **Teacher and parent support on AI use**

Many students were uncertain about the role of AI in school learning. Across all cases, approximately half of students said they were unsure whether schools should allow kids to use AI (45%–58%). Agreement (17%–27%) and disagreement (21%–35%) were close to balanced, with disagreement slightly exceeding agreement at two of the four schools. This uncertainty again suggests that students may lack clear guidance, confidence, or examples of how AI should fit into learning.

Most students (74%–87%) from all schools agreed that kids should learn when it's OK and not OK to use AI tools. Most (64%–87%) also agreed that it's important to follow the rules when using AI. However, while there was considerable agreement to these questions at all four schools, the most agreement was at Case C, where a higher proportion of students indicated that a grown-up had spoken to them about when it was OK to use AI at school.

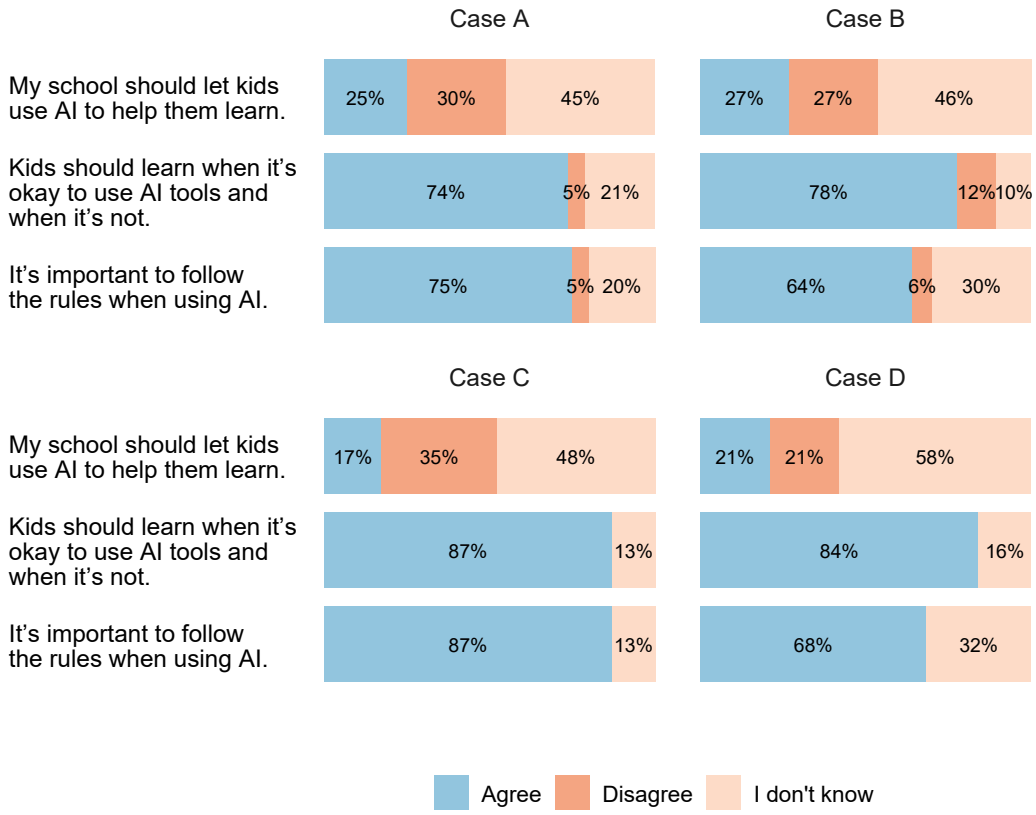

FIGURE 17: **Students' view on school and teacher support of AI**

Taken together, these results paint a picture of uneven access to adult guidance about generative AI. In three of the four cases, no more than one-fifth of ākonga recalled a conversation about when it is OK to use AI, compared with nearly half in Case C. However, across all schools, strong majorities agreed that learners should learn the rules for responsible AI use, and about half remain unsure whether AI should be allowed in classrooms. These figures point to anopportunity and need for schools to provide age-appropriate guidance so that learners develop informed and confident AI practices.

AI accuracy and cultural responsiveness

About one in four (25%) learners in Case A agreed that some students in their class do not like using AI, with slightly higher agreement in Case B (31%) and Case C (39%). Almost no one in Case D expressed agreement (6%) or disagreement (0%) and almost all indicated that they weren't sure (94%). While reported uncertainty was highest at Case D, in the other cases, at least half were unsure (50%–68%), and disagreement was rare, reaching one-quarter (25%) only in Case A.

The students were also generally unsure whether they would recognise when AI might harm their learning. Agreement that "kids know when using AI might hurt their learning" was less than one-third of students in all cases (9%–30%), with agreement being lowest at Case C, where the highest proportion had reported that an adult had spoken to them about AI. Levels of uncertainty were high at all schools, with at least four in 10 respondents unsure (44%–65%), suggesting a lack of confidence in learners in their ability to judge appropriate use.

In Cases A, B, and C, belief in the fairness of AI was strong (52%–61%). Case D stood apart, with only one in five (18%) agreeing and the remainder (82%) expressing uncertainty. Perceptions that "AI sometimes gets things wrong" were more uniform and emphatic—nearly nine in 10 students in Case C (86%), three-quarters in Case A (75%), and almost two-thirds in Case B (62%) agreed. Four in 10 (41%) of Case D students agreed, with the remainder unsure.

Responses on cultural questions were mixed, and uncertainty remained high. Agreement that "AI might not always understand or respect all cultures" ranged from just under one-quarter in Case D (24%) to nearly half in Case B (47%), with intermediate levels of agreement in Case C (31%) and lower agreement in Case D (43%). There was less disagreement (0%–25%), though large proportions in every school were unsure (39%–76%).

We also asked students whether they agreed with the more direct "AI doesn't 'get' my culture" question prompt. Agreement to this was low across all cases (6%–15%), with higher disagreement (indicating that they felt that AI did "get" their culture) in all cases except Case D, where the remaining students (94%) all indicated "I don't know".

When asked whether they agreed that "AI can help me learn te reo Māori or other languages", at least four in 10 agreed for all cases (41%–50%). Disagreement was lower (0%–19%), with a large number of students at all schools unsure (35%–59%).

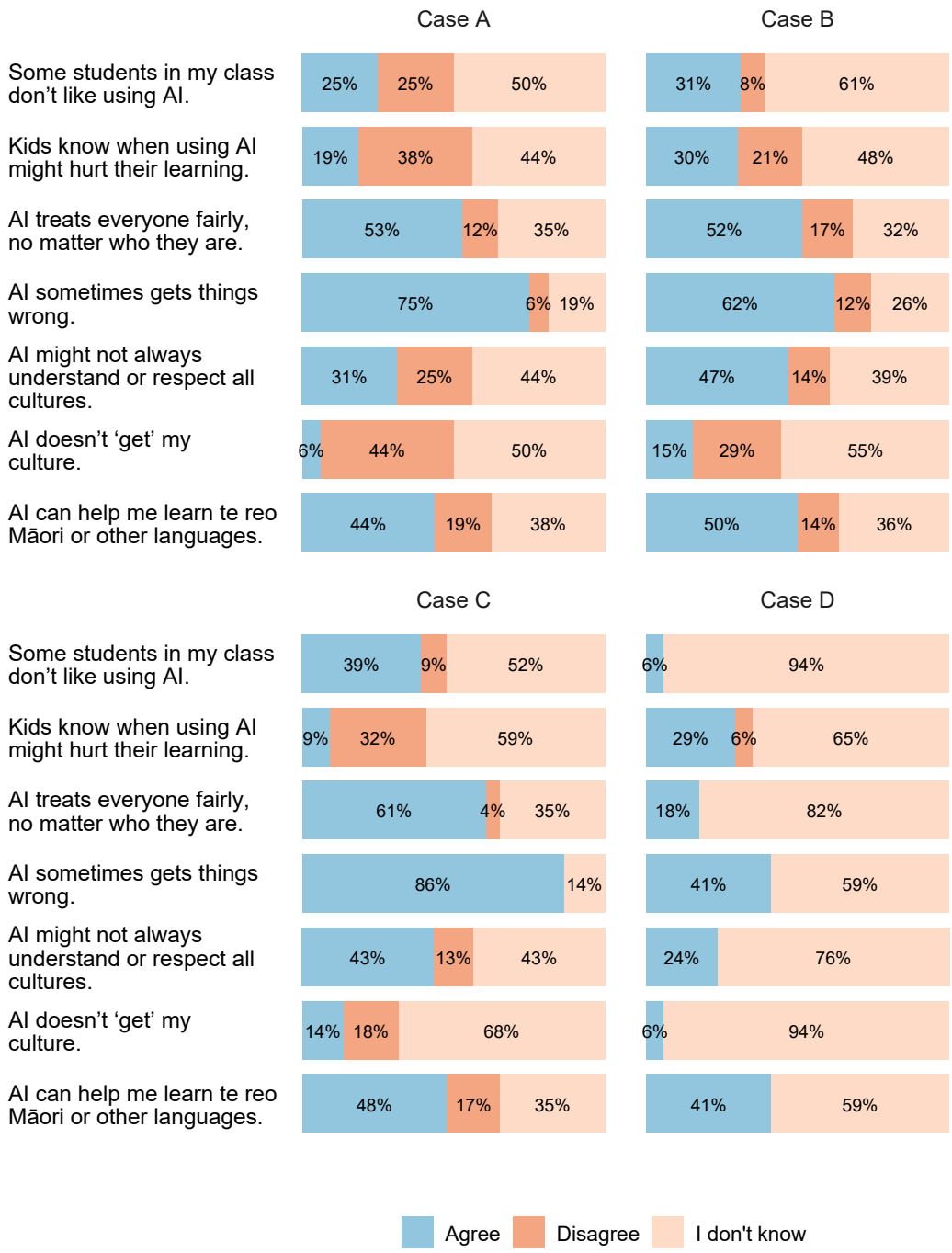

FIGURE 18: **Students' cultural awareness of AI use**

Taken together, the student responses suggest limited confidence and considerable uncertainty among older primary learners about generative AI's limits and cultural fit. Less than a third believed they could tell when AI might harm their learning, and most were unsure whether classmates like using generative AI. Although most students in three of the four cases view AI as generally fair, more students also recognise that it "sometimes gets things wrong" than did not, and large minorities in all cases suspected it may not respect all cultures.

Environmental responsiveness

Agreement that "using AI has an impact on the environment" clustered at modest levels in Case B, Case C, and Case D (18%–24%), while no learners in Case A agreed (0%). Disagreement reached about one-quarter in Case B (27%) and Case C (23%), reached nearly one-third (31%) for Case A, and was lowest for Case D (6%). Uncertainty dominated in all schools (48%–76%).

More students recognised that "AI needs a lot of energy to work", but responses again differed considerably by school. Agreement was higher in Case A (44%) and Case B (33%), lower in Case C (26%), and lowest in Case D (12%). Disagreement was more similar across schools (12%–18%). In all cases, a large proportion were unsure (44%–76%).

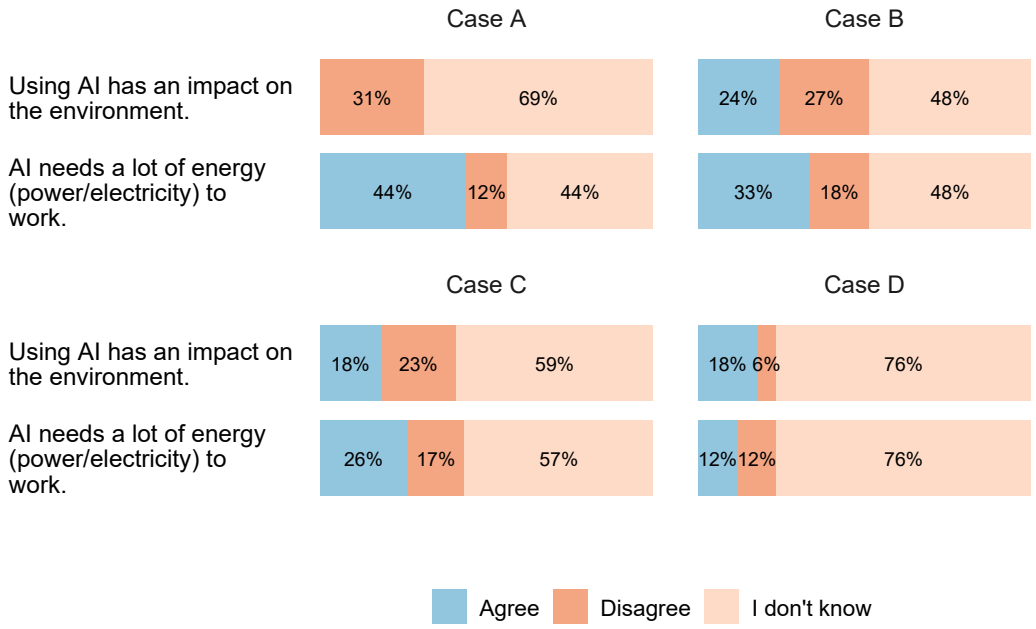

FIGURE 19: **Students' environmental awareness of using AI**

Awareness of AI's environmental footprint is limited and uneven. These figures point to a knowledge gap that would need addressing before meaningful classroom discussions on AI sustainability can take place.

Students' future thinking and impact of AI

The youngest group of students from Case A were the most excited about learning with AI in the future, with more than one-third (35%) expressing enthusiasm—the highest among all cases. More than half (53%) agreed that it's important for students to learn how to use AI, and nearly as many (47%) believed AI can support students who learn differently.

In addition, these students also showed awareness of AI's limitations. Approximately half (53%) recognised that overusing AI might hinder critical thinking, and that AI could eventually replace some human jobs (50%).

Fewer than one-third of students from case B (30%) showed excitement about learning with AI in the future, and only slightly more (35%) agreed that it is important for students to learn how to use AI. However, more than half (59%) agreed that AI can help students who learn differently, that using AI too much hurts their critical thinking (58%), and that AI might replace some jobs in the future (55%).

Students from Case C had the highest agreement on all items in this question block except excitement (27%). More than two-thirds (68%) believed it is important to learn about how to use AI and around six in 10 (59-62%) agreed that it is important to use AI tools, that AI can provide support forpeers who learn differently, and that using AI too much might make it hard for them to think on their own.

Case D students were the most cautious overall. Less than one in five (17%) indicate that they were excited about learning with AI in the future and one-third (33%) agreed that AI can help students who learn differently.

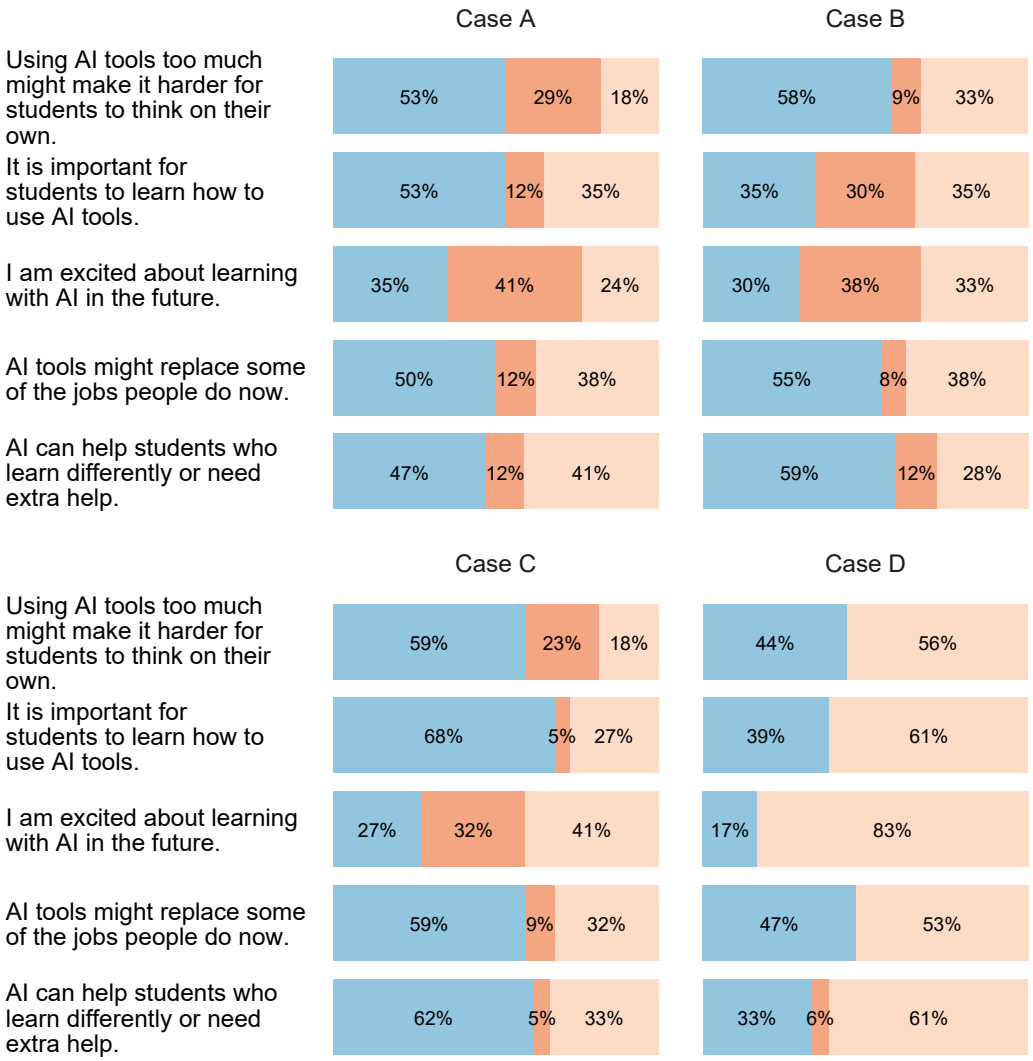

FIGURE 20: **Students' future thinking about AI**

Overall, our data imply that learner attitudes towards AI are shaped more by local context than by year level. Some classes paired high excitement with ethical caution, while others viewed AI as perhaps useful but less exciting. Across all groups, our data suggest that learners see AI as having potential to support diverse learners as well as seeing risks such as diminished critical thinking and future job displacement. These patterns suggest that effective AI education may need to balance varied motivational levels with discussion of both potential benefits and limitations.

List experiment

A list experiment is a survey technique designed to help respondents honestly answer sensitive questions, reducing social desirability bias. Participants are randomly assigned to either a control group or a treatment group. The control group receives a list of non-sensitive statements, and respondents indicate only how many of these statements (not which ones) apply to them. The treatment group receives the same list, plus an additional sensitive (or "target") statement. The difference in the average number of selected statements between these two groups provides an indirect estimate of how many respondents endorse the sensitive statement. In the student survey, the sensitive (target) statement used was: "I use AI to help with schoolwork in ways my school might not like."

Due to statistical power constraints, only one school's data (Case B, with 58 student responses) was suitable for analysis. Simulations indicated that, even under the most statistically favourable scenario (where every treatment participant endorsed the sensitive statement and where responses were received from an equal number of participants from both groups), at least 54 responses per school were required to achieve 95% statistical power, and approximately 34 responses from a school were needed for 80% power. Consequently, data from schools with fewer responses were not analysed because the results of hypothesis testing would be of limited inferential value, as failing to reject the null hypothesis for the test would be poor evidence of the truth of the null hypothesis (i.e., the probability of a type II error is high).

In Case B, the only school with adequate responses for analysis, the list experiment result was statistically significant. A one-sided t-test (alpha = 0.05) showed a p-value of 0.004, with a 95% confidence interval indicating that the true difference in means is greater than 0.39, with an actual difference between our sample means (in the two groups) of 0.99. In practical terms, this provides strong statistical evidence that a meaningful proportion of students in this school are using AI for schoolwork in ways that they are not sure their school would support.

Although the evidence is currently limited to a single case with adequate statistical power, this result further suggests a need for schools to proactively engage with students about AI use, clarifying expectations and addressing areas of uncertainty. Given the sensitive nature of this topic and limitations in statistical power across other cases, these results should be viewed cautiously and primarily as an indication that further investigation in this area may be warranted.

Though any conclusions here must be highly speculative, this result may also suggest that caution is warranted when asking students directly about generative AI use, either in focus group or survey contexts, as they may be hesitant to be fully honest, particularly if generative AI tool use is becoming ingrained in their learning and they feel that acknowledging such use could lead to disciplinary consequences or disapproval from teachers or whānau. Self-reported interviews and focus groups

may consequently underestimate the true prevalence of student generative AI use, especially in cases where school expectations remain ambiguous or punitive. We suggest that future research should employ methods that minimise social desirability bias. At the same time, schools may wish to establish nonpunitive channels where learners can discuss how and why they turn to AI tools when planning their own policies governing student use.

9. Conclusion

This study offers insights into how a cohort of New Zealand primary school teachers—disproportionately early adopters with a strong interest in generative AI—and students are integrating generative AI tools into their teaching and learning.

Overall, the survey findings point to several implications for Aotearoa's primary education sector. Perhaps most importantly, there is already generative AI use occurring among many primary teachers and their students. Though primary school students who use generative AI to support their schoolwork are likely still in the minority nationally, the use among these students (which is almost certainly growing) and their teachers needs to be taken seriously. The habits that students develop at this age will go with them to secondary school, where generative AI use is more common and has been more widely studied.

We believe that the use of generative AI in teaching and learning is inevitable for both primary teachers and their students, making it essential to have conversations about how to adopt these tools ethically and equitably. The question is not whether AI will be part of primary classrooms (it already is), but how to incorporate it in a way that maximises learning benefits while safeguarding students' wellbeing and privacy, honours Te Tiriti o Waitangi, and ensures equitable access so that all ākonga can engage critically with these new tools.

Our research underscores a strong demand from primary teachers for support and guidance in using AI tools. Most surveyed teachers (85%) said they would benefit from additional training or support with AI, yet less than half had received any professional development in this area, and only about one-third felt their school leadership actively encouraged innovating with AI in the classroom. This gap between front-line enthusiasm and institutional backing is problematic. Generative AI capabilities are advancing rapidly. As perceived benefits for teachers and students grow, unsupported or ad hoc adoption risks creating "shadow" practice where individual teachers use increasingly powerful tools unevenly, without oversight or the ability to comfortably share their successes and failures with colleagues. Without clear support, many educators will remain cautious or feel "in the dark" about best practices, while others proceed on their own. Such an imbalanced approach could mean missed opportunities and inconsistent practice across schools as well as risking data exposure and privacy violations from poor governance.

Addressing this will likely require deliberate initiatives to build teacher capability and confidence. Practical steps could include hands-on workshops, how-to guides, and peer learning networks to help teachers share strategies and successes. Professional development should also extend beyond technical training to cover AI ethics and safety, as many primary teachers do not currently feel confident teaching about issues such as AI bias or responsible use. Giving teachers knowledge about topics such as algorithmic biases and data privacy will help make classroom AI integration more effective and safer. Encouragingly, education authorities in other countries have begun providing such support. For example, Australia's national AI schools framework is accompanied by online teacher modules to build educators' skills. New Zealand's education leaders could similarly invest in systematic professional learning so that AI knowledge spreads beyond early adopters and consistently informs teaching practice across New Zealand.

A related risk is that some students will deeply embed AI use into their learning process without oversight or guidance and with uneven success, with some seriously impeding their acquisition of foundational skills and others successfully using generative AI to accelerate their learning. This too, we argue, can be best addressed by providing guidance to students about how to use generative AI to support learning from an early age.

Another implication of our findings is the importance of resourcing. Many teachers in our study who used AI were relying on free, publicly available tools. This approach has enabled experimentation but comes with serious limitations—free versions are often dated and, consequently, in the context of rapidly advancing technology, also usually less capable and more prone to errors and bias. This reliance on free tools also means that many educators may not have a good understanding of the capabilities of current LLMs, which may also leave them unprepared to support students who might access more powerful AI applications outside of school. An additional benefit of premium tool use is that some LLM providers exempt premium users' data from training by default, which lowers privacy risk.[7]

We suggest that schools consider budgeting for teacher access to approved, vetted AI platforms, so that experimentation can happen within supported environments with information sharing between teachers in a carefully considered privacy context. Proactive investment in infrastructure and licences would also put all schools on a more equal footing and help prevent widening gaps between those with AI resources and those without. Without such steps, there is a risk that wealthier or more tech-ready schools will surge ahead while others are left behind. Ensuring every primary school has adequate devices, connectivity, and technical support, alongside guided and supported access to AI, will be essential if the benefits of generative AI are to reach all teachers and learners.

In addition to teacher development and improved access to tools, it will likely be necessary to revise some aspects of the primary school curriculum. Digital literacy and critical thinking are already central in New Zealand classrooms but extending it to include discussion of generative AI will likely become necessary in the coming years and will likely need to be iteratively developed as generative AI technologies are changing rapidly and seem likely to continue to do so in the near future. New materials could potentially introduce learners to what AI can and cannot do, how to use generative tools responsibly, and how to question AI-produced information. Other jurisdictions have begun experimenting in this space—for instance, Australia's revised curriculum now includes elements of AI and data literacy, and provinces such as British Columbia have issued guidance on ethical AI use in K–12 education. Aotearoa New Zealand is well positioned to use these and other real-world experiments as reference points while walking its own path.

As discussed in the introduction, other education systems have recognised the importance of comprehensive AI frameworks. Australia's government, for example, replaced blanket bans with a nationwide AI-in-schools strategy outlining principles for privacy, equity, teacher training, and curriculum alignment. The UK Department for Education has likewise released detailed guidance on generative AI use in schools. In parts of the US, state authorities have mandated that every school district establish an AI policy. These examples demonstrate that a policy vacuum is not necessary and should be avoided if we want schools to be consistent, safe practices. New Zealand should similarly ensure that all schools, including primary schools, have clear parameters for AI use to reassure both educators and whānau.

7 For example, both OpenAI and Google disable training on Enterprise/Team/Edu (OpenAI) and Gemini for Google Workspace (Google) by default. During the writing of this report, on 30 June 2025, Google made Gemini in Google Classroom with its enhanced user privacy available for free to all Google Workspace for Education editions.

The emerging policy landscape should also reflect Aotearoa New Zealand's cultural context. Many teachers in our survey were already trying to use AI in ways that explore or support students' identities, but they also report that their current AI tools sometimes fall short in this regard. Many common LLMs have limited understanding of te reo and te ao Māori and tend to reflect Western perspectives, which can result in culturally biased or insensitive outputs if used uncritically. In some cases, locally customised solutions or partnerships with AI developers may be needed to improve tools' performance for a New Zealand context. We are optimistic that significant improvements are likely possible within the context of existing models and through working with AI providers, many of whom are already generally working to reduce bias, to better address New Zealand's specific needs.

In conclusion, we found substantial use of generative AI tools in our sample by primary teachers and their students. This shows that generative AI is already being used in New Zealand's primary classrooms for teaching and learning. Surveyed teachers perceived benefits in using these tools, but they are also facing challenges, especially in the policy and training space as well as in the capabilities of some of the tools they are using. Fortunately, there are paths forward. Based on the evidence we've collected, a focus on a few key areas has the potential to greatly improve current practice. Most importantly, we suggest comprehensive professional development for teachers, ensuring equitable access to AI tools and infrastructure, the development of school-level and national-level generative AI policies, and prioritising culturally responsive AI practices. By addressing these needs in a proactive and principled way, we believe that generative AI can be incorporated in primary schools in a way that enhances teaching and learning for all tamariki.

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