

The benefits and challenges of using AI in learning and teaching for early childhood student kaiako and kaiako with learning disabilities

Kerry Purdue | Open Polytechnic | Te Pūkenga

Fleur Hohaia-Rollinson | *Te Rito Maioha Early Childhood New Zealand*

Jackie Solomon | Open Polytechnic | Te Pūkenga

Donna Williamson-Garner | Open Polytechnic | Te Pūkenga

In this article, we explore generative artificial intelligence (GenAl) as a tool to support early childhood education (ECE) student kaiako (teachers) and kaiako with learning disabilities during their training and teaching careers. Although early childhood teaching is highly rewarding, the focus and commitment needed to qualify as an ECE kaiako can be stressful. Early childhood teaching is also demanding. Kaiako must have not only the range of knowledge and skills needed to provide positive, responsive and inclusive learning environments for all children but also the ability to manage numerous teaching and administrative tasks. These demands, as our own research, detailed in this article, shows, can be particularly challenging for ECE student kaiako and kaiako with learning disabilities. Al, with its capacity to assist with study, teaching and administrative tasks, offers potential in addressing these difficulties. We conclude our article with the provocation that the benefits of Al for ECE student kaiako and kaiako with learning disabilities far outweigh the challenges.

Introduction

The rapidity with which generative artificial intelligence (GenAI, hereafter referred to as AI) technology, which includes tools such as ChatGPT, are being developed, adapted and applied in everyday life presents an important opportunity for initial teacher education (ITE) and early childhood education (ECE) workplaces in Aotearoa New Zealand to explore how AI can assist early childhood student kaiako (teachers) and kaiako with learning disabilities. AI has the potential to provide these ākonga (students) and kaiako with transformative tools that support their participation and success during study and make the accomplishment of everyday teaching tasks such as administration and documentation much easier.

Research addressing and confirming the utility and efficacy of such tools in ECE in Aotearoa New Zealand is, however, limited. This situation is due in part because of the current cautious approach within Aotearoa New Zealand's education sector to AI use by ākonga and kaiako in schools (kura, primary, and secondary) and by kaimahi (staff) and ākonga in tertiary education organisations (Ministry of Education, 2024; New Zealand Qualifications Authority, n.d.). This article is an early step towards addressing this research gap.

We begin the article by defining learning disabilities and detailing the various types. We then present research we have done that highlights the types of discrimination and challenges student kaiako and kaiako with learning disabilities can experience during their preservice and in-service journey. From there, we define generative AI, take a closer look at specific AI tools and the types of assistance they can offer this group of ākonga and kaiako with study and teaching tasks and responsibilities. We end by briefly weighing up the benefits and challenges of these tools for study and teaching purposes.



Learning disabilities

SPELD NZ (n.d.) states that "Specific learning disabilities [SLD] is a general term used to describe a range of unexpected learning difficulties that are significantly interfering with an individual's academic or work performance or other activities of daily life." Examples of SLD include dyslexia, dyspraxia, dyscalculia, and dysgraphia. These impairments affect a person's reading, writing, spelling, handwriting, and mathematics abilities to varying degrees and can range from mild to severe (SPELD NZ, n.d.). Dyslexia is one of the more commonly known SLDs. According to the Dyslexia Foundation of New Zealand (n.d.), it affects 1 in 10 people. Various organisations, such as the Dyslexia Foundation of New Zealand, the Learning Disabilities Association of New Zealand, the Ministry of Disabled People, and SPELD NZ, champion the rights of individuals with learning disabilities to advocate for education settings and workplaces that are proactive in supporting people with SLDs.

Statistical information about people with SLDs in Aotearoa New Zealand is difficult to ascertain. Data accuracy is variable and dependent on how SLDs are defined. Impairments affecting learning, memory, concentration, and everyday activities are also encompassed in broader neurological, psychological/psychiatric and cognitive types of disability and impairment. This variability is acknowledged in a briefing to the Minister of Health in 2024, which estimated that approximately 15% of New Zealand's population are affected by neurodiverse conditions such as autism, attention deficit and hyperactivity disorder (ADHD), and epilepsy or learning disabilities such as those mentioned above (Ministry of Health, 2024). Other factors compromising SLD data include under-reporting, lack of diagnosis or misdiagnosis, and awareness.

Some impacts of learning disabilities on learning and teaching

SLDs can vary from mild to severe and impact an ECE student kaiako and kaiako differently, but that does not mean these people are unable to participate, contribute and meet their study requirements or fulfil their teaching roles appropriately. Types of impact include reading comprehension, writing difficulties, difficulties completing administrative tasks and documentation, communication challenges, issues with time management and organisational skills, maintaining focus and attention, and problems with social interactions and understanding social cues.

ITE learning and teaching environments and ECE workplaces that understand ākonga and kaiako with SLDs process information and learn in different ways are likely also aware that these people may simply need certain supports and accommodations to fulfil their study and teaching roles and responsibilities. Such support helps increase these ākonga' and kaiako' confidence, self-esteem and sense of belonging, which in turn can enhance their academic achievement during their ITE and help secure professional success in their ECE workplaces (Griffiths et al., 2023; Hall et al., 2024; Purdue et al., 2024). However, as our own research, described in the next section, shows, ITE providers and ECE services do not always exhibit this understanding and support, and especially so if they see the SLD as a deficit rather than a strength.

Learning and teaching experiences of ECE student kaiako and kaiako with SLDs

The research presented here is part of a project we conducted in 2023. (For information on the full study, please see Griffiths et al., 2023, Hall et al., 2024; Purdue et al., 2024.) Our aim was to capture the voices of disabled ECE student kaiako and kaiako so as to gain an understanding from their perspectives of barriers they were experiencing in their learning and teaching environments because of their disabilities. The student kaiako and kaiako in this study who identified as having learning disabilities reported through a survey various forms of discrimination, both subtle and overt, that were impeding their learning and teaching. These ākonga and kaiako expressed that they often encountered others who hold the assumption that a kaiako with any form of disability, including learning, is less capable or competent than other kaiako, even when their impairment may not affect their study or teaching abilities (Griffiths et al., 2023; Purdue et al., 2024).



Exclusionary experiences

When confronted with disablist attitudes and environments in their ITE or ECE settings, the student kaiako and kaiako with learning disabilities who responded to our survey said they typically chose to hide or minimise their disability because of fear of bias.

I tend to hide my disabilities and just try my best to get on with work/life. (Respondent 25)

I have learned to hide and mask my disability, which is exhausting. (Respondent 27)

I am very careful about who I tell and constantly mask [my disability] which is very draining. (Respondent 50)

Furthermore, the respondents with learning disabilities said they rarely challenged the disablist environment they experienced in their ITE or ECE setting, instead choosing not to disclose their learning disability or to find some other way of coping, which is what the following respondent did.

In practice, I rely on others a lot to ensure my work is correct. Wanting to come off as professional and not getting something wrong is a big worry I face most days. (Respondent 12)

Another respondent decided she not only had to minimise her learning disability but also go to great lengths to show she could manage and fulfil the responsibilities of her teaching role regardless of the challenges she faced.

No-one knows I have these issues ... I amaze people with my determination and how 'normal' I act or seem. (Respondent 16)

The above response highlights the effort that many student kaiako and kaiako with SLDs put into overcoming challenges. Unfortunately, their efforts may not always be recognised, which can lead to them feeling frustrated or resentful. In addition, kaiako with SLDs can experience negativity from colleagues who view them as a problem and unable to handle the pressures of teaching. Attitudes such as those evident in Respondent 23's comment can lead to social isolation and exclusion in the workplace:

I ... regularly struggle with the challenges of daily work ... and people used to complain that I couldn't keep up. "Sarah can do it and they have less experience than you, so I don't understand why you can't do XYZ." (Respondent 23)

Several respondents, among them Respondent 29 below, reported facing discrimination during the hiring process. In these situations, the prospective employers appeared to have an unconscious bias or hold misconceptions about these applicants' ability to meet the responsibilities of an ECE kaiako.

After becoming qualified it took a very long time ... before I got my first job as a teacher. I would get interviews but then at the interview I would disclose I had disabilities and then I wouldn't get any further with the job ... [I decided] not to disclose my disability ... until I had been employed. (Respondent 29)

Furthermore, opportunity for career advancement may be limited. Kaiako with learning disabilities can struggle to advance in their teaching careers because of assumptions that they cannot manage more involved roles, even though their abilities may be well-matched to those positions. This assumption sometimes become internalised by the kaiako themselves as illustrated in this comment:

I am worried about taking on more leadership roles that have more writing. Writing children's names on artwork can be hard sometimes as I worry about getting them wrong. (Respondent 9)



Because learning disabilities include a broad range of impairment and are not always readily apparent, ITE kaimahi, employers, peers and colleagues might not have adequate knowledge of these disabilities, again leading to misunderstandings or misconceptions of the teacher's behaviour or needs. Two respondents described the bias inherent in comments from others about learning disability.

The comments of "ADHD is just an excuse for being lazy"; "Everyone is a little ADHD." I don't tell everyone. (Respondent 22)

Much of the negativity I have experienced has come about because behaviours typical of ADHD are often seen as negative character traits ... Often when I am explaining my symptoms ... I get the response, "Oh, but I do that too," which is quite undermining and dismissive. (Respondent 39)

Student kaiako and kaiako with SLDs may require specific reasonable accommodations to succeed and grow in their role as kaiako, such as additional time to read and prepare documentation, access to assistive technologies, and modifications to the ITE or ECE setting. However, this support is not always forthcoming, even when asked for or because of other difficulties within the ECE sector as Respondent 12 below indicated. Without these accommodations, kaiako can be left feeling unsupported in their learning and teaching roles, excluded from facets of them, or face delays in meeting their responsibilities.

When I worked at [ECE organisation], they wouldn't accommodate me, so I had to resign, as I couldn't continue the hours they wanted me to do. (Respondent 3)

My ECE service does struggle to support me appropriately, not due to not wanting to but just as a whole sector. We are expecting more from kaiako (usually in documentation), which simply means more work for me outside of mahi. Just the expectation that the same work will be completed as the rest of my colleagues, which obviously takes me a lot longer. (Respondent 12)

The above experiences indicate that student kaiako and kaiako with learning disabilities may need to put in extra effort to meet their study and work responsibilities. However, this added pressure can lead to stress and burnout, especially if the ITE provider or ECE setting does not adequately address their needs. Discrimination, whether based on stigma, lack of understanding or misconceptions, or inadequate accommodations can hinder the wellbeing and teaching potential of student kaiako and kaiako with SLDs. ITE providers and ECE workplaces may not even fully appreciate the challenges student kaiako and kaiako with SLDs face, and more so if these ākonga and kaiako choose to keep their SLD hidden or do not fully disclose its impact. Al has the potential to limit or remove the exclusionary situations that student kaiako and kaiako with SLDs can experience during their ITE and teaching.

Artificial Intelligence use in ECE settings

What is AI?

Al refers to "technology that enables computers and machines to simulate human learning, comprehension, problem solving, decision making, creativity and autonomy" (IBM, 2024)—tasks that typically require human cognitive abilities. These systems can learn from experience, adapt to new information, and perform human-like tasks such as visual perception, speech recognition, decision-making, and language translation. Al has a set of advanced tools (such as ChatGPT) trained on vast datasets to generate new content, including text, images, music and videos. Al technology has long been used in applications like predictive text. However, it is now becoming increasingly accessible through both free and paid tools and services, enabling broader use across various domains (Ministry of Education, 2024; New Zealand Qualifications Authority, n.d.).

The large datasets that AI systems are trained on help improve their performance. The more data they have, the better they can learn and make accurate decisions (New Zealand Digital Government, 2024). Machine learning



models, for example, are trained by feeding them examples and allowing them to adjust their parameters to minimise errors. Over time, this training enables the AI to simulate human learning and decision-making by analysing extensive data to identify patterns and insights. This process enables AI systems to perform tasks with high accuracy, even in novel situations.

The benefits of AI within education

Al is revolutionising daily life and work by improving efficiency, accuracy, and scalability. It automates repetitive tasks, tackles global challenges like climate change, and enhances human productivity. Within Aotearoa New Zealand's education system, the Ministry of Education (2024) is increasingly recognising Al as a valuable tool with a transformative role, not only for ākonga but also for kaiako. Al personalises learning by adapting to individual needs, supporting diverse learning styles, and automating administrative tasks. Kaiako benefit from Al tools in various ways, especially in terms of facilitating and maximising their focus on student engagement and inclusivity. However, as Al's role expands, responsible integration is essential to maximise its benefits (Johnston, 2024; Ministry of Education, 2024).

Possible benefits of AI use by ECE student kaiako and kaiako with SLDs

Al offers considerable potential for transforming ECE for both student kaiako and kaiako with SLDs by improving accessibility, inclusivity, engagement, competency and confidence. Research by Ayala (2023), McDermott and O'Donoghue (2024), and Pierrès et al. (2024) highlights Al's role in breaking down learning barriers and supporting diverse learners and teachers, including those with SLDs. Al tools such as speech recognition software, grammar checkers, organisational apps, and digital planning and documentation tools, to name but a few, can streamline numerous study and administrative tasks, making learning and teaching more accessible and efficient for these akonga and kaiako.

Within ITE, AI can enhance study accessibility by offering real-time learning support. ChatGPT, for example, can assist by summarising texts, structuring responses, and converting speech-to-text. Other AI tools can break tasks into manageable steps, provide reminders, and reduce cognitive overload. These tools also foster independent learning by enabling student kaiako and kaiako with SLDs engaged, respectively, in ITE and in-service professional development to work at their own pace while receiving personalised guidance (Ayala, 2023; Pierrès et al., 2024).

Useful AI tools for use by student kaiako and kaiako with SLDs

- Assistive writing and communication tools: For student kaiako and kaiako with learning disabilities such as dyslexia or dysgraphia, writing and notetaking can be challenging. Al-powered tools can assist in various ways:
 - Speech-to-text: Tools like Google Dictate, Dragon NaturallySpeaking and Otter.ai can assist with writing tasks
 by converting spoken words into text. This facility can help overcome difficulties with spelling, grammar, or
 organising written thoughts. Because these tools enable dictation of emails, learning stories, newsletters, and
 assignments, they let student kaiako and kaiako with SLDs focus on content rather than the mechanics of
 writing.
 - Writing assistants: Al-powered writing assistants like Grammarly automatically check spelling, grammar, punctuation, and style, which helps the user ensure writing is clear, concise, and professional without having to spend extra time proofreading.
 - Text-to-speech: Tools such as Speechify, Natural Reader, Immersive Reader (in Office 365) and Chrome Read
 Aloud read text aloud, making it easier to process written material. 'Reading' and reviewing documents is a
 case in point.



- Google Translate or Microsoft Translator can help with language translation and communication with families. Kaiako can use these tools to help bridge language barriers with tamariki and their families, ensuring that communication is clear and inclusive. These tools can also translate emails, parent newsletters, and other written materials into various languages, making it easier for teachers to communicate with families who speak those languages. This greater ease of communication can help foster better relationships with families and ensure that everyone is on the same page regarding the child's learning.
- **Documentation of learning and planning**: All can assist with documenting learning and planning, giving student kaiako and kaiako with SLDs more time for engaging with children.
 - Document assessment and planning assistants: Tools like Storypark and Educa offer kaiako with learning disabilities an accessible, user-friendly means of creating digital portfolios for each child that not only record and share the child's learning but help extend it. These tools aid planning children's learning programmes and enhance communication with families. Capturing a child's learning is done by posting photos, videos, stories, moments, notes and responses, all of which can be facilitated by these tools.
- Administrative tasks: All can help reduce the time spent on administrative tasks, allowing teachers to focus more
 on engaging with children and families, or to have more non-contact time to discuss individual children's learning
 and planning with colleagues.
 - Newsletter generators: Al-powered tools can help teachers write newsletters in minutes. They analyse the
 topics or themes provided, then generate an initial draft.

Challenges associated with AI use by ECE student kaiako and kaiako with SLDs

While AI holds great potential as an accommodation tool for student kaiako and kaiako with learning disabilities, its use in learning and teaching can present challenges. These range from academic integrity and ethical issues to practical concerns about accessibility and teacher preparedness (Ministry of Education, 2024; New Zealand Qualifications Authority, n.d.; Teaching Council of Aotearoa New Zealand, 2017; UNESCO, 2024). Among the challenges or risks associated with AI use in ECE preservice and in-service settings are the following.

Integrity of the teaching qualification

Plagiarism, especially in assessments, is a real concern for both ITE institutions and student kaiako with learning disabilities (McDermott & O'Donoghue, 2024). While AI can greatly assist student kaiako with SLDs, AI can potentially do the work for them, which means they do not have to fully engage in course content and learning. Student kaiako with learning disabilities who become over-reliant on AI tools to complete assessments for them risk not gaining the theoretical and pedagogical knowledge required for teaching.

This possibility also raises the issue of academic integrity (New Zealand Qualifications Authority, n.d.). If student kaiako with learning disabilities rely too heavily on AI tools and fail to weave in their own understandings and insights from course content, the credibility of their work and the ensuing teaching qualification can be compromised. It is important that these students, like all other ākonga, use AI as an assistive technology tool to supplement learning rather than as a mechanism for generating answers to assessment tasks.

While all ITE institutions use plagiarism detection tools equipped to identify AI- generated content, these tools on their own will not deter cheating. All is here to stay and will only become more advanced. ITE institutions therefore need to put in place clear guidelines on acceptable use and ensure that AI is used as an accommodation tool to support learning rather than a shortcut for completing assessments (McDermott & O'Donoghue, 2024; New Zealand Qualifications Authority, n.d.). Student kaiako need to be fully aware of their obligation to uphold the *Code of*



Professional Responsibility and Standards for the Teaching Profession, specifically "Pono: showing integrity by acting in ways that are fair, honest, ethical and just" (Teaching Council of Aotearoa New Zealand, 2017, p. 2) and "Professional Learning: Engage in professional learning and adaptively apply this learning in practice" (p. 18).

Accuracy of information

The Ministry of Education (2024) acknowledges the transformative potential of AI in education but also provides guidelines for kaiako to mitigate possible issues and risks associated with its use. The Teaching Council of New Zealand (n.d.) has produced a symposia series that prepares kaiako for navigating the professional realm of AI. The Ministry of Education (2024) points out that AI content can contain many inaccuracies and possible biases, making it important to check the information provided is accurate and non-discriminatory. In particular, AI may not capture kaupapa Māori and Pacific knowledges and practices, which can lead to lack of representation and cultural bias in information products. Edwards (2023, p.180) also raises these concerns:

AIECEC applied to the digital documentation of young children's learning may contain embedded assumptions about children's progress based on developmentalism, particularly where technology start-ups enter the sector before those with expertise in the early years are able to engage with AI in a timely manner. Should this occur, understandings of diverse knowledges in ECEC, including indigenous worldviews, sociocultural, feminist, post-structural and/or socio-material thinking may not be captured in the social-digital interactions that characterise the postdigital.

The Ministry of Education (2024) furthermore advises kaiako to avoid inputting personal or sensitive information into AI tools or platforms, because AI models could make unintended use and sharing of this information, thus compromising privacy and confidentiality. The Ministry suggests that before users engage with AI tools, they read the terms and conditions carefully and abide by ethical and privacy requirements. Given these potential risks, it is important that ECE services and organisations establish clear policies regarding AI usage by kaiako, and that they ensure any policy requirements support kaiako with learning disabilities in fair, equitable and inclusive ways (Johnston, 2024).

Affordability and accessibility of AI tools

While the literature suggests that AI can promote inclusion and equity in education for people with SLDs, it also raises concerns about the affordability and accessibility of AI tools (Pierrès et al., 2024; UNESCO, 2024). Some AI tools have a free version, but many are paid and expensive, possibly too expensive for ECE student kaiako and kaiako with learning disabilities due to financial stressors and low pay rates. Affordability and access barriers can thus limit or prevent these ākonga and kaiako from fully benefitting from these tools personally and professionally (Pierrès et al., 2024).

Ensuring that technology and AI tools are accessible as learning and teaching supports may require ITE institutions and managers of ECE services and organisations to pay for these as part of providing reasonable accommodations for student kaiako and kaiako with learning disabilities. Also, many AI tools may not be fully compatible with other features used by these students kaiako and teachers, such as screen readers, text-to-speech programmes, and adjustable fonts and backgrounds. These accessibility issues can make it difficult for student kaiako and kaiako with SLDs to engage with the tools and platforms effectively.

Digital literacy and AI training

Al can be viewed as a game-changer for people with learning disabilities, but any digital tool is only as good as the person using it. Student kaiako and kaiako with SLDs need to have the necessary skills to use it successfully (Edwards, 2023; Johnston, 2024; UNESCO, 2024). Given kaiako and kaiako with learning disabilities may have had past negative experiences with technology, they may face anxiety and difficulties using Al tools appropriately if they do not have



adequate training in them. Opportunities need to be provided for upskilling in digital literacy and use of AI tools to ensure that student kaiako and kaiako with learning disabilities reap the full benefits of this new and increasingly advanced technological world (Pierrès et al., 2024; UNESCO, 2024).

Dependence on AI technologies

Because of Al's facility to produce information effectively and efficiently, another potential problem noted in the literature is over-reliance on Al tools (Johnston, 2024; Pierrès et al., 2024; UNESCO, 2024). Dependence may impede other important skills for student kaiako and kaiako with SLDs, such as creativity, critical and independent thought, and problem solving—all necessary attributes for effective ECE teaching. Student kaiako and kaiako with learning disabilities who become overly accustomed to relying on Al ideas and suggestions rather than working through a solution themselves risk becoming passive recipients of information rather than active participants in their own learning and teaching journeys. These and other challenges arising from the use of Al in education underline, for ITE providers and ECE settings, the importance of:

- Creating clear policies outlining ethical, equitable and appropriate use of Al.
- Providing training on how to responsibly use AI as learning and teaching aids.
- Ensuring AI tools are accessible to those who need them as accommodations *supporting* their learning and teaching.

Conclusion

Al tools and platforms offer significant benefits for ECE student kaiako and kaiako with learning disabilities. Al's ability to perform various study and teaching tasks quickly and efficiently enables these ākonga and kaiako to readily undertake jobs and responsibilities they once found difficult, time consuming, and stressful. The assistance these tools provide help lessen the pressure and anxiety associated with feeling insufficiently competent to meet study requirements or undertake teaching tasks and roles. Access to Al tools is like having a personal tutor at one's fingertips 24 hours a day, presenting a probable game-changer for this group of kaiako both personally and professionally. Importantly, in helping increase engagement in learning and competence in performing teaching tasks, these tools enhance these teachers' confidence. While there are challenges to consider, the potential of Al to assist ECE student kaiako and kaiako with learning disabilities to become successful learners and teachers is immense.



References

- Ayala, S. (2023). ChatGPT as a universal design for learning tool supporting college students with disabilities. *Educational Renaissance*, 12, 22–41. https://doi.org/10.33499/edren.v12i1.3866
- Dyslexia Foundation of New Zealand. (n.d). What is dyslexia. https://dfnz.org.nz/what-is-dyslexia/
- Edwards, S. (2023). Editorial: Early childhood education and care, artificial intelligence and the postdigital. Australasian Journal of Early Childhood, 48(3), 179–181. https://doi.org/10.1177/18369391231198910
- Griffiths, V., Hall, E., Hartley, D., Hohaia-Rollinson, F., Malcolm, J., Purdue, K., Tate, A., Solomon J., & Williamson-Garner, D. (2023). Kaiako with disabilities in early childhood education: Continuing an important korero in Aotearoa New Zealand. *He Kupu*, 7(3), 76–86. https://www.hekupu.ac.nz/article/kaiako-disabilities-early-childhood-education-continuingimportant-korero-aotearoa-new-zealand
- Hall, E., Griffiths, V., Hartley, D., Hohaia-Rollinson, F., Malcolm, J., Purdue, K., Tate, A., Solomon, J., & Williamson-Garner, D. (2024). Readiness to teach? Some challenges and barriers associated with the disclosure decisions of teachers with disabilities in early childhood education. *He Kupu*, 8(2), 96–109. https://hekupu.ac.nz/sites/default/files/2024-10/11%20Hall.pdf
- IBM. (2024). What is artificial intelligence (AI)? https://www.ibm.com/think/topics/artificial-intelligence
- Johnston, M. (2024). Welcome to the machine: Opportunities and risks of generative artificial intelligence for education. The New Zealand Initiative. https://www.nzinitiative.org.nz/reports-and-media/reports/welcome-to-the-machine/document/844
- McDermott, G., & O'Donoghue, C. (2024). Levelling the playing field: Using artificial intelligence to make the learning experience more accessible. *All Ireland Journal of Teaching and Learning in Higher Education*, *16*(2), 1–8. https://doi.org/10.62707/aishej.v16i2.829
- Ministry of Education. (2024). *Generative AI: Guidance and resources for educational professionals on the official use of artificial intelligence in schools*. https://www.education.govt.nz/school/digital-technology/generative-ai
- Ministry of Health. (2024). *Overview of neurodiversity*. https://www.health.govt.nz/system/files/2024-08/h2024036865-briefing-overview-on-neurodiversity.pdf
- New Zealand Digital Government. (2024). *Public service AI framework*. https://www.digital.govt.nz/standards-and-guidance/technology-and-architecture/artificial-intelligence/public-service-artificial-intelligence-framework
- New Zealand Qualifications Authority. (n.d.). Academic integrity and artificial intelligence: Information and resources for tertiary providers on academic integrity and artificial intelligence.

 https://www2.nzqa.govt.nz/tertiary/assessment-and-moderation-of-standards/academic-integrity-and-artificial-intelligence/
- Pierrès, O., Darvishy, A., & Christen, M. (2024). Exploring the role of generative AI in higher education: Semistructured interviews with students with disabilities. *Education and Information Technologies*. https://doi.org/10.1007/s10639-024-13134-8
- Purdue, K., Griffiths, V., Hall, E., Hartley, D., Hohaia-Rollinson, F., Malcolm, J., Solomon, J., Tate, A., & Williamson-Garner, D. (2024). Barriers to and facilitators of inclusion and equity for teachers with disabilities in early childhood education: Advancing the conversation in Aotearoa New Zealand. *NZ International Research in*



Early Childhood Education Journal, 26, 30–44. https://oece.nz/members/research/2024-nzirece-journal/inclusion-equity-teachers-early-childhood-education/

- SPELD NZ. (n.d.). Specific learning disability definitions. https://www.speld.org.nz/specific-learning-disability-definitions
- Teaching Council of Aotearoa New Zealand. (2017). *Our code, our standards: Code of professional responsibility and standards for the teaching profession*.

 https://teachingcouncil.nz/professional-practice/our-code-our-standards/
- Teaching Council of Aotearoa New Zealand. (n.d.). *Navigating the professional realm of generative artificial intelligence for teachers*. https://teachingcouncil.nz/professional-practice/rauhuia-leadership-space-home/rauhuia-leadership-space/symposia-series/#genai

UNESCO. (2024). AI competency framework for teachers. https://unesdoc.unesco.org/ark:/48223/pf0000391104