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# Generative AI and narrative assessment practice in early childhood education

## *What professional and ethical issues must we discuss?*

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The uses of generative artificial intelligence (GenAI) and large language models (LLMs) is of increasing interest in early childhood education (ECE). However, a recent step-change in the uptake of such technologies is giving rise to ever-more questions of the ethics and professional consequences of using all kinds of technologies in ECE. Furthermore, new possibilities and implications for teachers' work are emerging, including in assessment. This article poses questions about the uses of GenAI technologies in the context of narrative assessment as learning stories in Aotearoa New Zealand ECE. We prompt and analyse a LLM-generated learning story to think about the utility of such tools if they are used for assessment purposes in the context of *Te Whāriki*.

### Introduction

Artificial intelligence seems to have become a part of our everyday lives. Generative artificial intelligence (GenAI)<sup>1</sup> and large language models (LLMs) are an increasingly hot topic in schools, universities, workplaces, and homes as they are evermore proposed as ways to save time, increase efficiency, and decrease cognitive load (Khan & Suhluli, 2025). Within the profession of teaching in Aotearoa, Coblenz et al. (2025) surveyed students and early-adopter teachers in primary settings about their GenAI use. Findings from this study suggest that surveyed teachers felt “cautious optimism about using AI to support their work” (p. 2) with most relying on free GenAI tools for support with planning, assessment, curriculum materials, and personalised learning support. Much published research on GenAI uses by early childhood education (ECE) kaiako in Aotearoa is yet to emerge, although Purdue et al. (2025) have argued for its use within ECE

initial teacher education and by disabled kaiako. While these New Zealand papers are generally supportive of teachers' uses of GenAI and LLMs and many authors assert that the benefits of use outweigh the risks, there is also a longstanding body of work raising concerns about if and how best to use GenAI.

For example, European-based research suggests that uncritical and instrumental uses of tools may foster cognitive offloading with negative effects and encourage AI individualism (Brandtzaeg et al., 2025). An erosion of critical thinking skills along with the loss of professional autonomy and ethical decision making are other perceived issues (Gerlich, 2025). As far back as 2021 UNESCO had noted that GenAI systems are infused with the values and beliefs of those that create the technologies, and we recognise that beliefs and values aren't necessarily universally shared.

While global debates about digital professionalism and ethical AI uses circulate, we, as researchers and teacher

educators working with kaiako in ECE, have become increasingly aware in these past two years of teachers taking up such tools. In their efforts to lessen perceived time burdens of administrative and paperwork tasks, kaiako are already using GenAIs, including in relation to assessment, planning, and the writing of learning stories (Lee et al., 2024; White & Chase, 2024). While our firsthand experiences of this are mostly anecdotal, we are seeing some evidence of GenAI and LLM use by student teachers when learning to write learning stories. For us there are ethical and professional questions and concerns to be considered if kaiako are to use such tools, and this article is a means of promoting discussion and awareness as we work to build our own and others' critical digital literacy in the context of GenAI.

### The scope of this article

In the face of the kinds of GenAI usage we had experienced and learnt of, we wondered what it might mean for assessment practice if free GenAI tools were used uncritically by kaiako to help them write learning stories. What kind of information might a GenAI provide in response to basic prompts? Would LLM responses look like what we would expect in terms of assessment in the context of our curriculum framework? What kinds of planning might an LLM suggest? And what could such outputs mean for student and teacher learning about and practices of assessment within ECE? In response to our questions, we decided to ask an LLM to write a learning story for a fictional child (Casey) and then we reflected upon the outcomes and related ethical and professional questions this raised. Thus, this article is intended to provoke discussion and to increase consciousness about the potential consequences of using GenAI in assessment and planning.

In what follows, we will first describe some key tenets of quality assessment in Aotearoa New Zealand ECE before locating narrative assessments as learning stories in this context. Then, we briefly address what research tells us about how GenAI tools are being used in teaching before stepping into a role play of sorts, bringing an LLM together with assessment and planning questions to see what kinds of responses are generated after our basic request about writing a learning story. As we describe the LLM responses, we point out questions about the utility of the responses for assessment and planning. Again, the purpose of this article is to provoke discussion and to raise consciousness

about potential unintended consequences of using LLMs uncritically in these ways.

### Tenets of quality assessment in early childhood in Aotearoa New Zealand

Any assessment information that a teacher generates should be credible (valid), trustworthy (reliable), and manageable to implement (Sutton, 1992), to ensure the information helps teachers and learners understand and plan for intended and valued learning. Furthermore, if assessment is to improve learning, as our curriculum framework *Te Whāriki* (Ministry of Education, 2017) (hereafter, *Te Whāriki*) expects, then assessment practices should reflect sociocultural teaching and learning approaches and serve principally formative purposes (Carr & Lee, 2012, 2019, Ministry of Education, 2004/9, 2017). A key purpose of formative assessment in the context of *Te Whāriki* is to help children understand their learning dispositions and working theories, all the while positively shaping children's identities as learners (Carr 2001, Carr & Lee, 2012, Sands & McChesney, 2023). The right feedback, provided in a timely manner, can grow children's understanding of their learning power and processes as it motivates further learning (Black et al, 2003, Carr et al., 2015). Narrative forms of assessment information provide a uniquely situated view of what kaiako have noticed, recognised, and responded to as they engage with tamariki (Carr, 2008; Ministry of Education, 2004/9). Narrative assessment as learning stories provide insights into real relationships, unique histories, and the collaborations of children and others (human and more than human), as they have learnt, lived, and played together in ECE over time.

We are of the view that the narratives which kaiako write to children about their learning become part of a rich tapestry of education and life stories that attest to the child's belonging and worldly contributions. In the face of the emerging GenAI or LLM use noted at the beginning of this article, we wonder what will it mean in years to come when older children and youth begin to realise that what's been written about them was not this view of their identity construction and learning, but rather the product of software engaging in, as Noam Chomsky puts it, "high-tech plagiarism" (2023, 4:28mins). There seems to be a lot to consider if and when a teacher hands over assessment responsibilities and relatedly planning, to GenAI technologies and tools.

### About narrative assessment as learning stories in Aotearoa New Zealand.

As has been well documented (Carr, 1998a, 1998b), learning stories are a narrative approach to assessment that emerged from research into the early implementation of *Te Whāriki* (Ministry of Education, 1993). That research explored observable outcomes for children in the context of *Te Whāriki* and fit-for-purpose approaches to assessment.

Learning stories were born at the time of the narrative revolution in human psychology (Engel, 2000). As a cultural tool, narrative is also fueled by feminist and indigenous perspectives and worldviews (Hatherly & Sands, 2002). The narrative turn recognised that people use stories to make meaning—they act to organise thoughts, memory, intentions and identities (Bruner, 1991). As *Te Whāriki* is concerned with the development of learner identities over time, and in how teachers, in partnership with whānau and children can design relevant early childhood learning environments, learning stories provide a means of illustrating how specific learning dispositions, working theories, and evolving capabilities are supported in practice. Within the writing or speaking of narratives, kaiako make visible the networks of relationships that give rise to shared experiences and meaning. In ECE, learning stories illuminate the people, places, and things that are contingent with the valued learning being prioritised. Why does this matter? Because if kaiako can understand the context within which capabilities, theories, and identities are flourishing, that information can be used for planning and evaluation.

In light of *Te Whāriki* as an Indigenous framework for conceiving of the child, the child's learning, and the child's empowerment, learning stories are a fit-for-purpose form of narrative assessment that can attest to and achieve the multiple means we describe earlier. To be clear, learning stories are not the only form of assessment that might be undertaken within an ECE setting. Yet, as a way of producing useful formative assessment information aligned with *Te Whāriki* expectations, we think that the appropriateness of narrative assessment as learning stories is clear.

As we learnt about teachers' and student teachers' use of LLMs to produce assessment and planning information in ECE, we became perplexed about the utility of an LLM for this work. These wonderings led us to two specific questions to guide this inquiry: (1) How are

GenAI tools already being used in ECE? and (2) How might an LLM address children as it also describes how they are learning to learn?

## How are GenAI tools being used already in ECE?

We are principally interested in how teachers' work might be being mediated by GenAIs rather than how GenAI tools might be being used by children. Furthermore, while there still seems to be a healthy skepticism about whether and how to use GenAI and LLMs in teaching (Dickleman & Greenberg, 2024, Luo et al. 2024), and ongoing questions about the safe and ethical uses of the technologies (Crescenzi-Lanna, 2023; Kurian, 2023, Luo et al. 2024, UNESCO 2021), we know that the discourse of easing teachers' work-burden and saving time are persuasive motivators for using GenAIs for some (Coblentz et al., 2025; Purdue et al. 2025). Emerging research is already indicating that in ECE teachers are using the tools for assessment and planning in Aotearoa New Zealand and overseas (Lee et al., 2024; White & Chase, 2024), and researchers have been able to map out a landscape of teachers' uses of GenAI tools for a range of purposes (Kanders et al., 2024), namely for the design of culturally relevant teaching, for administrative tasks, and the development of teaching content. Some of these kinds of uses were also noted in Coblentz et al.'s (2025) recent Aotearoa New Zealand study. Zhang et al. (2026) note that within research based in the USA and China, GenAIs are used for the benefit of ECE when actively mediated by adults. Uses of technologies within assessment-related work has also been shown by Nuttal et.al. (2023) to have produced new kinds of work activity and expectations.

## Generating a learning story with a LLM

We decided to generate a learning story in an LLM (using the free version of the widely internationally available tool ChatGPT) for a fictional child named Casey. We then wanted to analyse the story with a view to how it was able to reflect some expectations of narrative assessment as learning stories (Carr, 2001; Carr & Lee, 2012, 2019; Hatherly & Sands, 2002; Hedges, 2022; Ministry of Education, 2004/9, 2017). Specifically, we were thinking about the sociocultural nature of the assessment and asking how the LLM's responses would meet the fundamental assessment purpose of addressing

children about how they are learning to learn. Of the LLM's responses we asked:

- Who is the audience (the child or some other person)?
- How is the context for the learning visible (the contingent people, place, and things)?
- What is the valued learning being documented (learning dispositions and working theories)?
- What can be said about the formative nature of the learning story (mana-enhancing feedback to the child about their learning power and strengths)?
- How are planning suggestions directed (towards learning dispositions, working theories, and/or something else)?

Our readings of the generated responses provided an opportunity to think through our question of utility. Did the LLM produce responses of the kind warranted by *Te Whāriki*?

In the next section of our article, we share the results of our LLM enquiries. Our purpose was not to help the LLM improve or learn, nor was it to encourage teachers to begin using LLMs more. Rather, we used the tool so that we might better understand and be able to discuss with others any potential consequences for assessment practice and ECE professionalism.

## "Help me write a learning story..."

We asked the LLM to "help me write a learning story about Casey" (see. Figure 1).<sup>2</sup> Inadvertently we'd undermined our own

assessment tenets with this very instruction, it was a reminder of how easy it is to erode the underpinnings of quality assessment in the context of *Te Whāriki*. We should have input instead, "help me write a learning story for Casey"—after all, the primary audience of formative assessment information must be the learner. To test the effect of our error, we asked the LLM to write a second learning story, about a different child, using the proper instruction. It didn't seem to make a difference to the output, however—the same kinds of features we discuss in the Casey story were observed.

The LLM's response continued beyond what is shown here to suggest we continue to structure our learning story using headings of "learning and development" and then a "reflection". Neither of these are features of a learning story that we recognise. We gave the LLM more information: "Over these last 8 months I have noticed Casey using their voice in different ways. Casey is 16 months old." Figures 2 and 3 give the LLM's response, a story about Casey's "vocal exploration". Once the LLM generated its response, we began to appreciate the limitations of a predictive algorithm, devoid of much assistance from its user, to understand the nuances of the prompt. For us, the noticing of Casey's use of voice, in the context of *Te Whāriki*, is a reflection of the child's increasing capacity to confidently express points of view, feelings, and ideas, and, relatedly, to speak into the social milieu. This is not what the LLM prioritised as valued learning in its reply (see Figures 2 and 3).

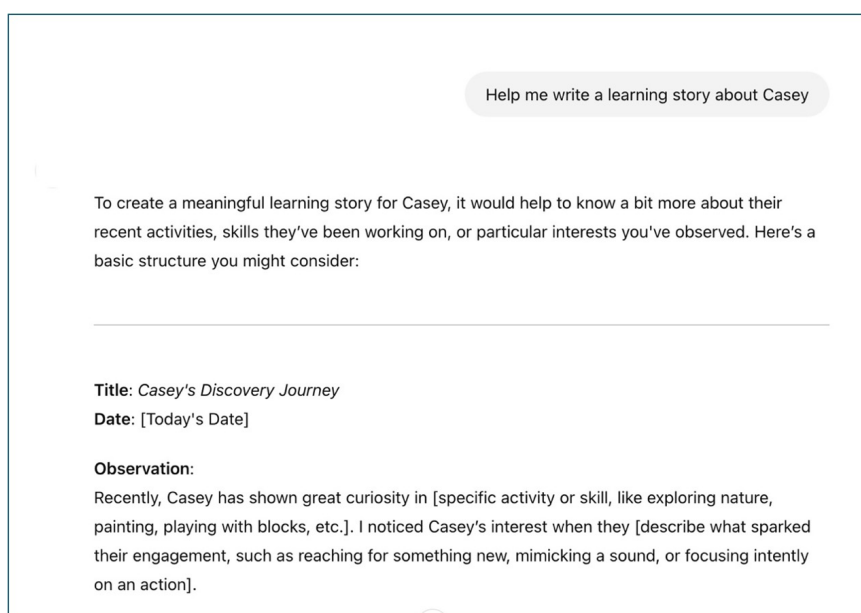


FIGURE 1. LLM STORY INITIAL INSTRUCTION

The LLM asked us if there was anything we wanted to add. But, before exploring that, we pause to describe some of things we were starting to notice about the LLM's responses. First, in relation to our question of "audience", the LLM's response was to write about Casey, rather than to them as the principal audience for the assessment information. Therefore, the "formative purpose" of the learning story as a tool to help Casey understand their learning power was undermined. The LLM's output was not informing Casey about their learning strengths, nor helping them understand how to become better at learning (i.e., how they

were strengthening their learning dispositions and working theories). Nor could it, due to the absence of information from us, describe anything that Casey's teachers or others might have been contributing to the valued learning of "using their voice". There was no sense of the contingent people, places, and things that contributed to the learning that we were wanting to document about (Casey's use of voice as they confidently express points of view, feelings, and ideas, contributing to the social milieu). As noted, we didn't give any prompts about this, but the point is that Casey's capabilities, as described by the LLM, are almost entirely

self-referential, apart from some hallucinated<sup>3</sup> comments about Casey repeating sounds, enjoying responses from others, and enjoying social interactions and connections. Thus, the expectation of sociocultural assessment output is displaced by a more individualistic developmental psychology one. The LLM was writing about development, not learning, specifically "vocal development"—quite a different focus to our notion of "voice" given in our first prompts. "Voice" is a much broader conceptual and practical construct, related to children's empowerment, rights, and agency—such conceptions were absent in the LLM's construction.

The LLM response was narrowly focused on developmental outcomes: Casey's vocal, and relatedly social development. The response compared Casey's capabilities to a normative developmental trajectory (babbling laying the groundwork for speech) and gave no recognition to any distributed agency involved with Casey's capabilities. The story did not tell us about the things we expected it to, such as how Casey's use of voice reflects their emerging capacity to speak into, contribute within, and belong within a place. As such, the response was quite removed from the curriculum context of *Te Whāriki* (Ministry of Education, 2017) and focusing our attention not on the empowered child's learner identities but on developmental trajectories instead.

The LLM response was more summative and diagnostic than formative in its purpose. It summed up Casey's "vocal development" at a point in time and diagnosed where Casey was "at" along a predetermined and normative trajectory. In taking this approach, Casey is produced as partial, someone who has yet to arrive at an expected stage of development, and who needs support to get there. The developmentalism within the response abounds.

We began to seriously question the utility of the GenAI response for assisting with a teacher's assessment workload and saving time. Not only was the LLMs story questionable in terms of credibility in relation to *Te Whāriki*, it also struggled to produce features of a learning story that we would expect to see: the story wasn't formative, it wasn't about Casey's learning dispositions or even a working theory about "voice". So, we pointed the LLM to the curriculum framework and asked it if it could help us "interpret the story in relation to *Te Whāriki*".

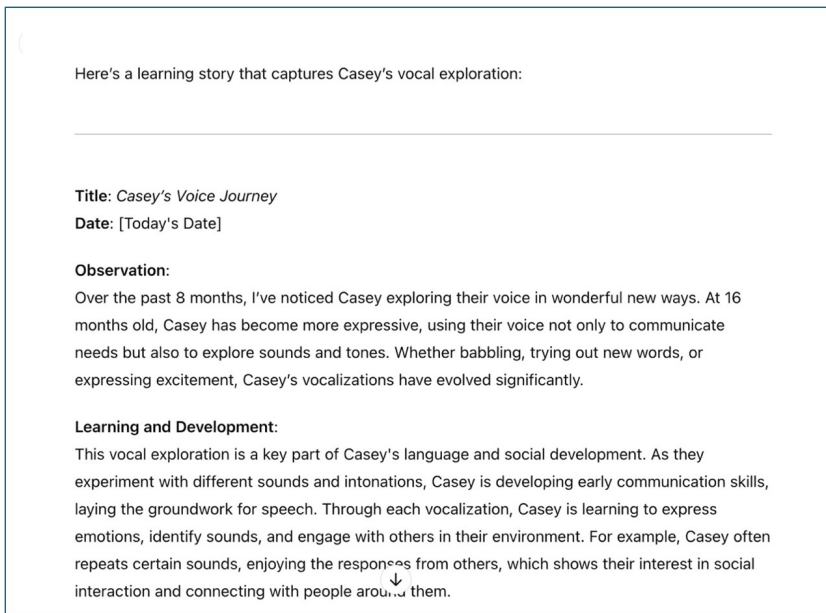


FIGURE 2. LLM STORY (PART A)

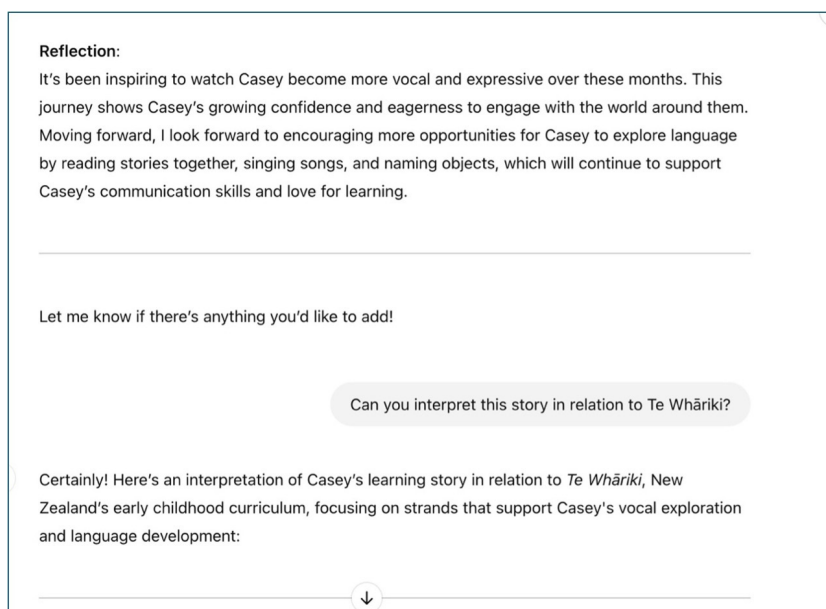


FIGURE 3. LLM STORY (PART B)

## Interpreting a story in relation to *Te Whāriki*

In response to our question about “interpreting”, the LLM suggested possible “*Te Whāriki* links” to the response it had created.<sup>4</sup> These can best be described as surface-level readings of the English texts of curriculum strands, even though some domains of mana (i.e., *Mana reo* and *Mana aotūroa*) are mentioned, construed again within a dominant discourse of developmentalism (see Figures 4 and 5).

Here the goals of *Te Whāriki* are used to explain, in the past tense, Casey’s development. This is a fundamental misappropriation of the goals of the framework which are to guide

kaiako in their design of learning environments that afford the particular learning the framework intends (one that prioritises mana, learning dispositions, working theories). Our concern here is that, if these kinds of interpretations and misuses of *Te Whāriki* were to go unnoticed by people using an LLM like this, it would seriously undermine the framework and curriculum implementation. Finally, we decided to ask the LLM for suggestions about planning.

### What would a LLM suggest a teacher plan for?

A list of suggested activities was produced alongside comments about how these aligned

with *Te Whāriki* and would support specific developmental outcomes if these were actioned (see Figure 6).

The internal coherency of the response, from the point of view of the LLM, was apt—in its responses to our basic prompts, it had prioritised aspects of a child’s development as the valued learning, interpreted these in relation to developmental trajectories, and suggested activities that would be considered so-called developmentally appropriate for a teacher to implement. However, that a teacher might take lists of activities like these and use them as planning in the context of *Te Whāriki*, is a significant problem of practice we think, if even for the simple reason that planning an activity is not the same as planning for learning. No intentions were evident in the response of planning for the child’s mana, any working theories, or learning dispositions.

### Concluding thoughts and invitations

Returning to our initial statement of focus for this article, we continue to question the utility of the LLM-generated assessment information, especially now that we recognise the kinds of effort likely required to help the LLM produce a learning story recognisable to us working in the context of *Te Whāriki*. Our informal exploration raised questions about the credibility of the assessment information. Did the LLM responses address the learning of value within the curriculum (learning dispositions and/or working theories)? No. Instead, it defaulted to a developmental framing of a child’s vocal and social development and continued in that vein to suggest activities that could be planned to build on Casey’s “interest in vocal exploration and early language skills”. The LLM-generated responses privileged individualised Western notions of child development and failed to address learning in ways that consider Indigenous understandings of the child and the valued learning expressed within *Te Whāriki*.

Was the LLM response formative in nature? No, it didn’t speak to Casey about their learning (learning dispositions of confidently expressing points of view, feelings, or ideas, or of taking responsibility in the social milieu), nor did we consider its responses to be particularly empowering of Casey as a learner. Instead, the LLM took up a summative and diagnostic approach to the assessment information, pointing out Casey’s accomplishments relative

#### Te Whāriki Interpretation of Casey’s Voice Journey

Through Casey’s evolving vocal exploration, several strands of *Te Whāriki* are clearly reflected:

##### 1. Wellbeing – Mana Atua

*Goal 2:* Children experience an environment where their emotional well-being is nurtured. Casey’s journey with their voice highlights their growing emotional expression and sense of security. Their caregiver has created a responsive environment where Casey feels comfortable exploring sounds and emotions through vocalization. Casey’s confidence in using their voice demonstrates their sense of safety and belonging within their surroundings, which is crucial to well-being.

##### 2. Belonging – Mana Whenua

*Goal 4:* Children know they have a place and are connected with others. By responding to Casey’s vocalizations, their caregiver strengthens Casey’s sense of belonging and connection. Each interaction reinforces Casey’s understanding that their voice matters and that they have a place in their caregiver’s world. This recognition encourages Casey to continue using their voice to communicate and connect.

FIGURE 4. LLM INTERPRETATION OF A STORY IN RELATION TO *TE WHĀRIKI* (PART A)

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FIGURE 5. LLM INTERPRETATION OF A STORY IN RELATION TO *TE WHĀRIKI* (PART B)

A teacher could plan activities that build on Casey's interest in vocal exploration and early language skills while encouraging social connection and emotional expression. Here are some ideas aligned with *Te Whāriki*:

### 1. Interactive Storytime with Repetition and Rhymes

- **Activity:** Choose picture books that have repetitive phrases, rhyming, or simple animal sounds. Encourage Casey to join in on repeated phrases or mimic sounds (e.g., "Moo," "Quack").
- **Te Whāriki Link:** This supports *Communication – Mana Reo* by exposing Casey to new sounds and vocabulary in a playful, repetitive format. The activity also fosters *Belonging – Mana Whenua* as Casey builds connections through shared reading and interaction.
- **Goal:** To help Casey recognize words, predict phrases, and experiment with sound and intonation.

### 2. Singing and Rhythm Play with Instruments

- **Activity:** Sing songs with simple, repetitive lyrics and encourage Casey to use a shaker or drum to join in. Use songs that invite vocal participation, such as "Old MacDonald" or "If You're Happy and You Know It."
- **Te Whāriki Link:** This supports *Exploration – Mana Aotūroa*, allowing Casey to experiment with rhythm and sound, as well as *Communication – Mana Reo* through vocal expression.
- **Goal:** To help Casey develop rhythm, r skills, and early music appreciation while practicing vocal interaction.

FIGURE 6. LLM'S SUGGESTED PLANNING

to a developmental trajectory and suggesting activities to boost Casey's vocal and social development. While the LLM was able to make some basic, summative evaluative remarks about two aspects of child development at one point in time, it failed to reflect the weaving of the child underpinned by *Te Whāriki* principles and strands. Within the LLM-generated story, Casey is a one-dimensional unit of analysis where their "voice" is limited to babbling and reproducing adult-prompted sounds. We were troubled by the fabrication of information within the LLM's responses. Casey was reportedly: "becoming more expressive", "babbling", "trying new words", "expressing excitement", their capabilities having "evolved significantly"—none of which were part of any of our prompts.

Finally, the purpose of narrative assessments as learning stories is not only to notice and recognise children's learning, but also to show how kaiako propose to respond. This requires kaiako to draw upon their professional relational knowledge and to work with the child and others in an empowering way. Planning relies on knowing who the child is, what their interests are, what motivates them, and what funds of knowledge they will likely draw from to make curriculum with others (Hedges et al., 2011). Weaving together these aspects of the child, with aspirations from whānau and the children themselves, means a localised curriculum based

on *Te Whāriki* can emerge. The result should be planning that is personalised for that child, addressing their many dimensions, presented in such a manner that the learning story continues in its efforts to become part of that child's identity building (Carr, 2001; Carr & Lee, 2012; Hedges, 2022). How can generic activity lists such as those produced in our LLM's response suffice?

To conclude, we think it's time to start talking more about teachers and student teachers' potential uses of GenAIs and LLMs in ECE assessment and planning work. We understand that kaiako are already using these tools and our experiences indicate that some student teachers are using them too. We feel obligated to speak into this space lest these emerging practices begin to inadvertently undermine our curriculum framework and professional and ethical practices as teachers, ultimately with negative impacts on children. For now, we present this analysis and critique of GenAI use in assessment and planning in the hope that we may continue our conversations with others about this vital work of kaiako in ECE in Aotearoa New Zealand and beyond.

### Notes

- 1 We recognise that GenAIs and large language models LLMs are related kinds of technological tools but not exactly the same—and we do not profess to be expert in either. LLMs are used for language-based

inquiries, tasks, and responses, whereas GenAIs can produce a range of other forms of content (e.g., music, images, and code). In our experience, "GenAI" is mostly used colloquially to refer to any tool that is creating novel content from its analysis of input. However, to achieve the task of "writing a learning story" it will likely have been an LLM tool that has produced the language-based response required. We use the terms interchangeably.

- 2 Note, the figures we share here are made from screenshots of our GenAI interactions from which we have deleted identifying logos.
- 3 Within the field of GenAI, hallucinations are a model's fabricated responses which occur when its probability algorithm generates a plausible but possibly factually incorrect, fabricated or nonsensical idea.
- 4 It may be noted by now that while we asked the LLM to help write a 'learning story' we are not referring to the LLM generated response as a 'learning story' because the response generated cannot in our view be accorded the status of learning story in the context of *Te Whāriki* and Aotearoa New Zealand ECE.

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