



ECE / OVERVIEW

Teaching as Inquiry for ECE settings

- 3 What is Teaching as Inquiry?
- 3 A spiral model for inquiry
- 4 Scanning
- 6 Focusing
- 7 Developing (and testing) a hunch
- 8 Professional learning
- 10 Taking action
- 11 Checking
- 12 Further reading

Summary *Teaching as Inquiry is a powerful form of teacher learning. It involves a continuous cycle of*

- *investigating children’s learning*
- *identifying and focusing on one or two specific areas to improve*
- *examining the impact of teachers’ actions for children’s learning*
- *coming up with a ‘hunch’ or a theory about what teacher action might improve children’s learning*
- *learning more from research and from others*
- *trying out a new or modified practice and checking its effect*
- *framing a new inquiry, and continuing the cycle*

Inquiry requires deep reflection and questioning of your practice, being honest in your self-reflection, as well as openness to new ideas, and being prepared to learn from failures as well as success. It can be a useful form of teachers’ professional development and feed into other processes such as self-review. Here, we outline how to carry out inquiry step by step, within a six-stage ‘spiral of inquiry’.

What is Teaching as Inquiry?

Teaching as Inquiry is an approach to teaching in which teachers continuously inquire into the impact of their teaching practices on children's learning, and make informed changes to improve their teaching practice and enhance children's learning. Inquiry occurs when teachers:

- systematically and consistently examine the relationship between their actions and what learning is happening for the children
- make good use of evidence and research in order to stimulate new ways of thinking about teaching and learning
- try out new ideas and evaluate the impact of these changes to practice

Inquiry requires sustained investigation and action, and may take 1–3 years, but it can be transformative and greatly satisfying.

Teaching as Inquiry is:

- reflective: characterised by deep thought and careful consideration of the relationship between teaching practices and children's learning
- action-oriented: focused on making and evaluating specific changes to practice
- deliberate: has clear purposes
- problem-defining: teachers identify a question, challenge or area to investigate and improve
- self-regulated: all actions are determined by teachers
- collective or individual: involving a team of teachers within an early childhood setting, or personal to an individual teacher and individual professional development
- focused on knowledge generation and the advancement of the teacher's learning and practice

A spiral model for inquiry

Timperley, Kaser and Halbert (2014) outline a useful model, the spiral of inquiry, which includes six phases:

- scanning
- focusing
- developing a hunch
- professional learning
- taking action
- checking

Scanning

Key question: What learning is happening for children in your early childhood setting?

Inquiry begins with the consideration of children's learning needs and families' aspirations, and how well these are being met by current teaching practices. When scanning, you are looking to find out what is happening for *all* children and their families, and get an overview of areas of strength and need. You will draw on evidence about children's behaviour, engagement, and learning dispositions as well as teachers' practices. It is helpful to seek the perspectives of children, families and communities too.

Why do it:

Scanning enables you to determine whether children are learning what you expect them to learn according to their families' aspirations and the learning priorities of your setting, so that you can plan an appropriate course of action towards improvement. The aim of the scanning phase is to become aware of a range of impressions, opportunities, and challenges within your setting.

How to do it:

Question

- Develop an inquiry mindset: be curious about children and their learning
- Get started: scans may be imperfect initially, but the key is curiosity and an inquiry mindset

Investigate

- Seek evidence: conduct an audit of portfolios to assess coverage, depth and continuity across children's individual learning. Don't just rely on evidence that is already available, but observe children and teachers' activities at different times of the day
- Include areas of learning across the breadth of *Te Whāriki*
- Ask children to talk about, or take photos of, what helps them to learn and what they enjoy and don't enjoy about the setting
- Invite family and community perspectives (for example, through questionnaires)

Reflect

- Reflect on and analyse the evidence within your teaching team
- Stay open to new information and insights: scanning doesn't mean finding evidence to support the status quo
- Maintain high expectations for children, ask yourself whether the experiences of children reflect best practice for learning
- Take time, don't rush, but don't get bogged down in this phase either: get an overview rather than perfect coverage (expect the process of scanning in the first cycle of inquiry to take about two months)

Scanning questions

What is happening for children in your setting?

How are children doing in relation to your setting's priorities for learning?

Do children show trust, a strong sense of self-efficacy and sense of self-worth?

Are routines flexible and responsive enough to support children's learning?

Do children have genuine opportunities to make choices and develop independence?

Are the languages and cultures of all children affirmed in the setting?

Do children have opportunities to explore, connect to, respect and care for Papatūānuku?

How strong are relationships between children and teachers, and how emotionally supported do children feel?

Are children developing prosocial strategies for relating to each other?

Do all children experience fair and equitable opportunities for play and learning, aligned with their interests, strengths, preferences and abilities?

Do children, parents and families contribute to curriculum decision-making?

How effectively do teachers respond to children's non-verbal communications?

How often do children have sustained interactions with teachers?

How effectively is te reo used and encouraged?

How well do teachers recognise and respond to diversity in language acquisition?

Are children offered literacy and numeracy activities that enable them to learn concepts about print and mathematics and develop knowledge of symbols?

Do children have sufficient opportunity to listen to, retell and create stories?

How effective are resources and opportunities for encouraging creative and artistic expression?

Do children have sufficient opportunities to explore and develop their physical capabilities?

How effectively are children supported and empowered to pursue challenges that build on their spontaneous play, capabilities, interests, and working theories?

Do children adopt a range of strategies for exploring, thinking, reasoning and problem-solving?

What opportunities are there for children's inquiry or longer term projects related to the development of their working theories?

Which learning dispositions do children tend to be most / least motivated to use?

What contexts do they demonstrate important learning dispositions in? What other contexts could be important?

What do children tell you while looking at their portfolios? Can they describe their strategies for thinking and learning, what they have been learning, and why these are important?

Questions adapted from Ministry of Education (2017), and Timperley, Kaser & Halbert (2014).

Focusing

Key question: Where should you concentrate your energies in order to improve children's experiences and their subsequent learning?

In the focusing phase you use information about areas of strength and need from your scan to help you determine where your time and energy need to be invested. Focusing is about establishing the priority for improvement.

Why do it:

The broad scan will have led you to many new perspectives on your children's experiences: the focusing phase is about narrowing and honing an area of investigation. Focusing frames larger issues into something more workable, and explores close-up questions that offer additional insights. After the focusing phase of the inquiry, you should have a good idea of what you want to focus your ongoing inquiry on and what it might involve.

How to do it:

Interrogate your evidence

- Review the evidence and question your findings during the scanning process. Ask yourself 'how do I know?' and 'why does this matter?' Do not assume you've got it all figured out!

Select an area of focus

- Focus on areas in which you have influence and can make changes, and identify what is most important and has most leverage for making improvement, rather than simply choosing an area of interest
- Ensure that your area of inquiry will be practice-focused, that is, investigating practice rather than, for example, creating displays
- Consider whether there are common areas about which you might collaborate as a team
- Focus on what is already happening: don't introduce completely new areas unrelated to the scanning process
- Select no more than one or two small and specific areas to keep the inquiry manageable: think deep and focused inquiry rather than shallow and scattered
- Think about how to build on strengths and positives as well as gain clarity on challenges
- Look ahead to the checking phase of the process: try to decide what changes you would like to see so that you can later assess whether your actions have made enough of a difference, and think about how you will assess whether improvement has occurred

Collect further evidence

- Don't jump to solutions or rush into 'doing something', but collect further information to clarify what is happening and ensure an accurate understanding of the situation: ensure your analysis is thoughtful and based on multiple, rich sources of information

Questions you might pose to focus your inquiry:

What popped out at you during the scanning process?

What are the strengths that your children show? How might you build on these strengths?

Are there aspects of your practice you can strengthen or do more of?

What's not working well?

Are some issues recurring, year after year, or across different groups of children?

Which issues consume the highest levels of energy, time and resources?

Which learning outcomes have children had the least opportunity to work on or develop?

What really matters most for children and families, and what will make the biggest difference to their learning?

What would be manageable for you and/or your team?

Questions adapted from Centre for Education, Statistics and Evaluation (2016), Halbert & Kaser (2013), Ministry of Education (2011), Sinnema & Aitken (2016), Te kete ipurangi (n.d.), and Timperley, Kaser & Halbert (2014).

Developing (and testing) a hunch

Key question: How are our practices contributing to this situation?

In this phase you reflect upon how particular teaching practices are related to your area of focus. This is an opportunity for you to put your teaching intuition into play, based on your observations and experiences with this group of children. The evidence you have uncovered will not provide absolute answers about the impact of particular teaching practices on children's learning, and you will have to make guesses. Framing your theories and beliefs as hunches enables you to subject them to scrutiny.

Why do it:

The aim of this phase of the inquiry is to make a statement about the relationship between particular teaching practices and children's learning, so that you can test this hunch by seeking evidence. You want to be reasonably confident about what's causing particular outcomes before you start experimenting with teaching practice in the next phase.

How to do it:

Express hunches

- Find a way to question your teaching beliefs and practices, ideally with the support of your teaching team
- Remain positive and constructive: this is not an opportunity to complain about things you have little control over, to blame others, or to vent your feelings about issues
- Think about and consciously surface your hunches about the impact of particular practices on children's learning, focusing particularly on the practices you can do something about

Interrogate your thinking

- Spend time considering all possible interpretations of the situation, and develop multiple explanations with which to develop new hunches; this is often easiest in collaboration with others
- Be cautious in coming to conclusions

Create hypotheses

- Construct 'If...then...' statements, and list evidence that would and would not support these statements, being as specific as possible (this will help you to investigate your hunch - vague ideas are not easily tested): for example, you might have a hunch that children are not using the block area because it is uninviting and not connected to children's current areas of inquiry, so you could state: 'If we position materials related to children's inquiries in the block area, more children would use it'
- Generate more hypotheses by considering curricular practices, teaching, environments, children, teachers and infrastructure as contributing factors to your issue of practice
- Think about how you might (fairly quickly) test out your hunches
- Be courageous and confident to put your hunches on the table to discuss with others, and to challenge well-established routines and structures

Test hypotheses

- Seek out evidence to confirm or modify a hunch, or reject it and develop a new one
- Don't worry if none of your hunches have any evidence base - move on to the next phase, professional learning, which may help you to devise and test new hunches

Professional learning

Key question: How and where can we learn more about what to actions to take?

Having identified what needs to be improved, the aim of this phase is to increase your knowledge about how you might do it better, drawing on research evidence as well as your own experience and that of other teachers. During this phase you identify new professional learning opportunities, and plan how to deepen your professional learning and translate that learning into practice.

Why do it:

This phase helps you increase your knowledge about how to bring about the desired changes in your children's learning. This phase may link back to and revisit the development of hunches, as your developing knowledge enables you to construct more hunches and theories to test during the course of your inquiry.

How to do it:

Create a plan

- Plan with the end in mind, that is, decide what evidence will indicate that children's learning has improved: plan your desired outcomes for children, and from there work out the required skills, knowledge and dispositions that children need

- Decide what you need to learn, connected to your desired outcomes for children, and how to learn it: create SMART (specific, measurable, attainable, results-oriented and time-bound) goals

Find relevant resources

- Consider what you already know that might be useful
- Identify resources to inform your thinking, and plan strategies for your learning (for example, creating a study group, or participating in an online community)
- Access current knowledge and expertise in your area of focus, and evaluate strategies you are considering to ensure they are evidence-informed and fit with your context
- Link opportunities for professional learning to your inquiry focus: don't just select professional learning activities that are convenient and readily available, or recommended or imposed by someone else
- Consider who you might be able to connect with for support

Engage critically with ideas

- Think beyond obvious solutions by drawing on colleagues, readings, research, resources and experts to expand your thinking
- Be open-minded: gather ideas from all sources and guard against being drawn to familiar ideas that fit with your existing beliefs about the right way to teach
- Be aware of the fallibility of research - research findings are often conjectural, and not necessarily transferable to your context, so consider what connections there are between your context and that in which the research was undertaken
- Aim to come to understand new ways of doing things in a deeper way, including their purposes and underpinning theory
- Identify what implications the knowledge has for your teaching and how you might adapt new knowledge to make it relevant to your particular teaching environment

Revisit

- Allow frequent opportunities to engage with new learning over an extended period of time
- Sustain your learning over time and consider how you will maintain motivation - the integration of very different ways of working and thinking will take at least one year, and often two or three years of engagement for real transformation to occur and for new learning to become embedded in your routines and practices

Potential sources for professional learning:

- Professional dialogue with, or observation of, other teachers in your teaching team or setting, or in other settings
- Online communities
- Practical knowledge gained through workshops and courses
- Academic research – presented at conferences and found in books, educational journals and in summaries on portals like The Education Hub

Consider looking at:

- Other settings with a similar focus
- Forming study groups and collaborative work
- Partnerships with university researchers

Taking action

Key question: What will you do differently to make enough of a difference?

This phase is about more than just implementing some new strategies, or trying out innovative and exciting new ideas. Taking action is about learning more deeply about new ways of teaching by exploring them in action, informed by a thorough understanding of why they might be effective for, and relevant to, your early childhood setting.

Why do it:

This phase is about 'tinkering' with ideas, finding out if and how they are transferable to your setting. Deep learning occurs when you try something out in action, reflect on how it went, discuss it with others and get their perspectives, and then try it out again.

How to do it:

Select

- Select from the knowledge and ideas you have learned and put them into focused, informed action
- Focus on intended outcomes for children's learning rather than activities
- Ensure there is clear alignment between the aims of your inquiry, the resources available, the actions to be undertaken with those resources, and how these actions will improve children's learning
- Be systematic, targeted and explicit about what actions you are taking and how you are going to monitor and modify them
- Have a planned timeframe which includes monitoring strategies
- Set goals for your teaching practice as well as for children's learning

Plan

- Think about how you will communicate to parents and children that you are going to try something new and why, and find out what they think
- Build trust: be aware that taking action and implementing change may engender feelings of vulnerability
- Encourage children to be involved in the inquiry and to take responsibility for goals they have identified with you
- Anticipate barriers and consider strategies to overcome them

Trial new actions

- Take risks, make mistakes and try again - have courage and experiment!
- Expect dips and plateaus: when progress dips, clarify and refocus your efforts with the intended outcomes, and see plateaus as opportunities to consolidate gains
- Support each other, celebrate successes and expect some failures

Monitor your impact

- Engage in ongoing monitoring and evaluation: keep a diary, note what is happening for children as a result of the change, and use it as a tool for reflection

- Observe children to see if they are responding differently; talk to families and colleagues
- Create opportunities for observation (peer-observation or video-recording: these are less intimidating when you take charge and determine what will be observed) to aid your reflection - such observations will enable you to develop a sense of what new practices are like from the children's perspective
- Create a tool in which you identify the elements important to your inquiry, then use this list to guide your observation and as a self-checking tool while observing a video-recording of your practice
- Review the use of the strategy or action with others - ensure you regularly report to others to help maintain momentum, and get ideas from other people

Adjust

- Consider how you might need to modify the strategy or action, and try it again with modification
- Show persistence as you inquire again and again

Checking

Key question: Have we made *enough* of a difference?

In this phase, you collect and evaluate information on the impact of your actions for your children's learning. This will inform where your inquiry might go next.

Why do it:

This is a crucial phase. It is not the last phase of your inquiry, but a bridge between this part of the inquiry and the next. It is also the phase that brings intellectual discipline to your inquiry. In this phase you are systematically analysing evidence to discover which strategies have been successful and how they might be improved.

How to do it:

Clarify what counts as success

- Link your checks back to the intentions for improvement identified earlier in the inquiry - lack of clarity about what the action was intended to achieve makes it difficult to measure its success
- Maintain high expectations that your inquiry-led actions will make a significant difference for all your children

Determine methods and timeframes

- Involve children and their families in the checking process
- Consider creating your own inquiry tool, such as a questionnaire
- Examine the same sources of evidence that you used in the scanning and focusing phases to see what impact the changes have had on children and families
- Check regularly so that adjustments can be made in a timely fashion: give your innovation and change time to have an impact, but don't leave it too long in case the strategies you are exploring are ineffective (about three months is sufficient)

Investigate findings

- Pay attention to evidence that indicates the impact may not have been as positive as anticipated
- Ask critical questions: don't use the checking phase to justify your actions

Adjust practice

- Make adjustments immediately
- If you do not get the results you hoped for initially, remember there is always something to learn: deepen your processes of observation, listening and critical thought, be patient and willing to risk being wrong and learn from failure, and try again

General checking questions:

What happened as a result of your change to practice?

What learning happened for your children?

How effective has what you learned and enacted been in promoting your children's learning and well-being?

What can you adapt, refine or revise in your understanding of your children's learning?

Did the changes made achieve the intended outcomes? If not, why not? If so, how will you sustain the effective practices and what are your next steps?

Did the change impact all children? In what ways? Or why not?

Did the changes made have any unintended (positive or negative) outcomes?

Is this the most efficient way to use limited resources?

What different approaches could you try? Should you ask children and/or families?

Why is it that this change to practice was successful in one aspect, but not in another?

Why is it that this change to practice was less successful for one group of children and/or families compared to another?

What new goals do you want to set? (Return to scanning)

Questions adapted from Centre for Education, Statistics and Evaluation (2016), Halbert & Kaser (2013), Ministry of Education (2011), Sinnema & Aitken (2016), Te kete ipurangi (n.d.), and Timperley, Kaser & Halbert (2014).

Further reading

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