

Dialogical Inquiry Model

Are you interested in helping your learners become more self-aware about the ways they inquire and converse? Would you like to improve the feedback that you give to your learners, and better understand how the tasks you set can shape how they approach them?



Why use the dialogue inquiry model?

- Provides a useful lens to think about ways of learning and inquiring
- Builds self-awareness of one's own ways of learning
- Provides an inquiry profile
- Builds capacity to inquire and have conversations of inquiry with others
- Builds capacity to provide productive feedback about learning
- Builds on existing models of learning
- Easily modified to own context

What is the dialogue inquiry model?

The dialogue model is intended as a temporary tool for helping learners and teachers be more aware of the different ways they learn and inquire in order to expand their options. It draws on and combines the four aspects from [Kolb's learning model](#) (experiencing, reflecting, theorising, applying) with Julia Atkin's Integral Learning model (detail, logic, holistic, feeling). Both models suggest that people have preferred ways of learning, however all four aspects need to be covered in cyclical learning processes to achieve integration of learning.

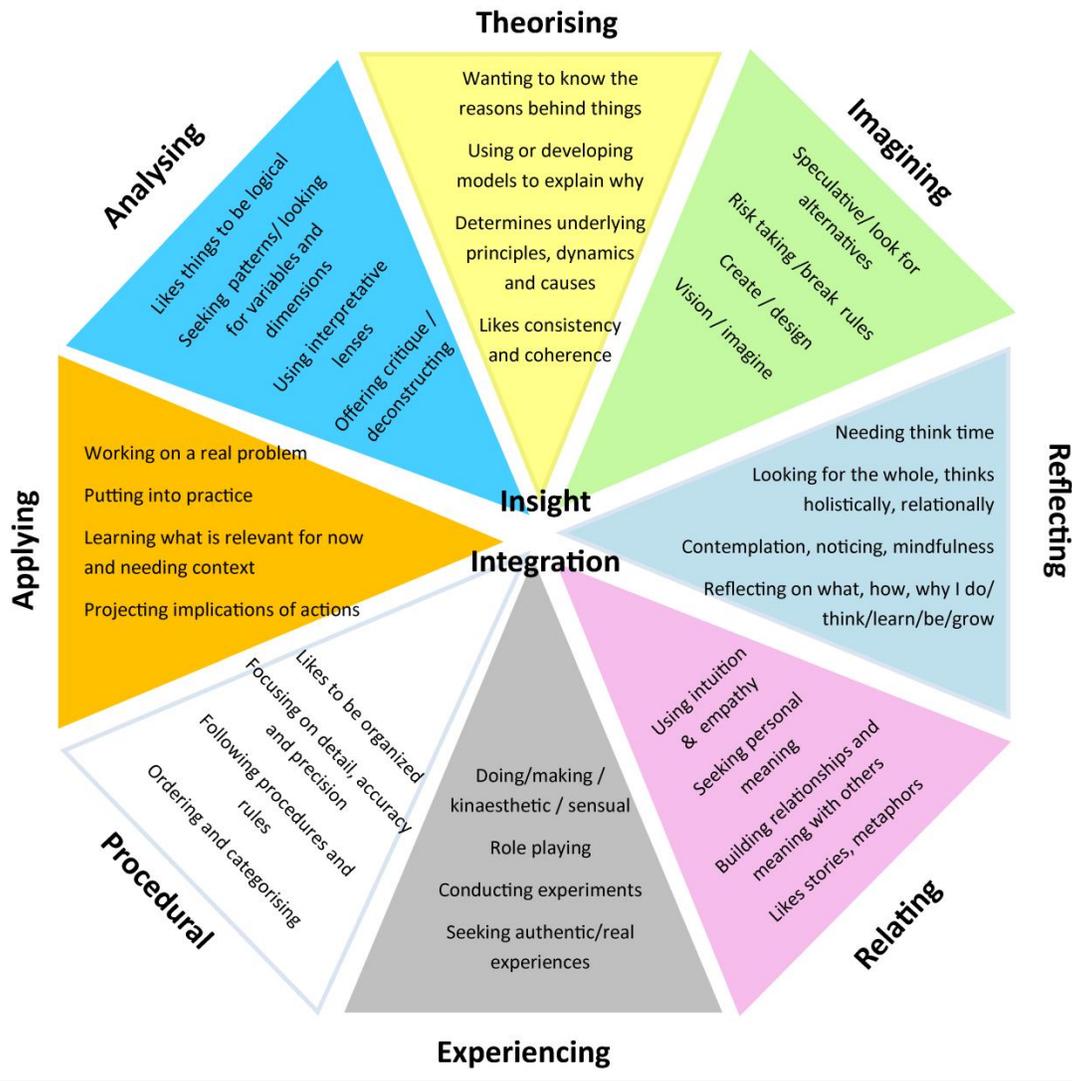
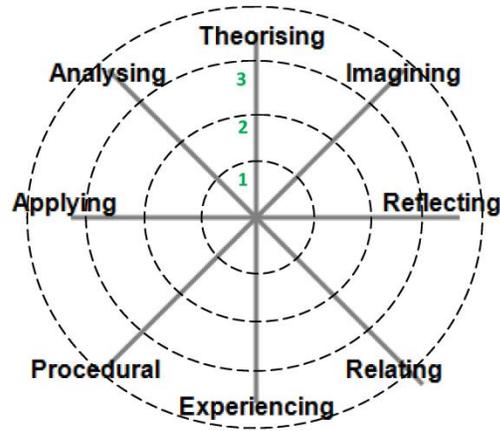
The dialogical inquiry model is a map where people can see the different learning modes they might use when having inquiry conversations. People might see themselves using two or more of these modes simultaneously or oscillating between modes, or moving through different modes in a more structured way. It is not cyclical, but often people take well-trodden pathways, avoiding areas they find difficult. Good inquiry is likely to visit many places on the map. Below is a process for getting familiar with the model by creating your learning profile.

Dialogue Inquiry Model

Create your Inquiry Profile

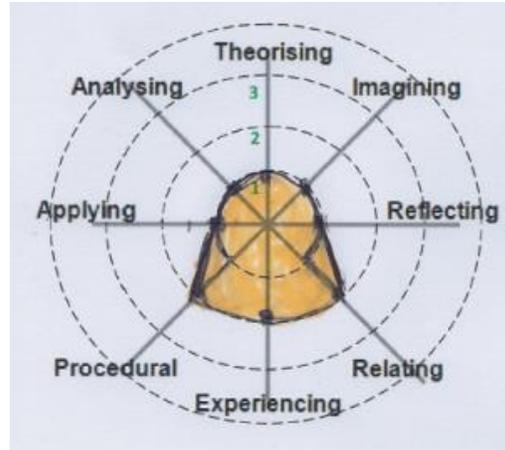
On the map below mark out those statements that resonate the most with who you are. Work out how many of each category that you have. On the map to the right mark with a dot on each axis this number, including if it is zero. Join the dots and shade in the interior of the shape that emerges.

Reflect: Does this represent the ways you prefer to learn or inquire? How does it compare to others' profiles? How does it compare to opportunities for learning?



Interpreting your inquiry profile

Working out an inquiry profile can give you some insights about your own learning and the way you inquire, as well as helping to build familiarity with the model. Sharing your profiles with others helps you to understand the differences between people and the way they respond to different learning opportunities. It may also help you appreciate the strengths people can bring to team situations and the value of teams with members who have mixed learning styles.



Reflecting on how your learning preferences have been developed can help you move beyond habitual patterns and consider other ways of learning or teaching.

Example: Tools for Learning Design Project workshop participants reflect on using the dialogical inquiry model

Reflection on learning:

During my school years I realise that while the bulk of my learning was in experiencing, relating, procedural and applying, I mostly was following the procedures of others. When in university, it was the creative and descriptive parts that engaged me, but I now had to learn to theorise and analyse.

Reflection on learning style:

When I look at my profile I see that it matches very closely the industry sector I am in and the training courses we run. However, I can see that there is a gap between my specific job requirements and my profile. I don't think I have enough of some of the top modes, and gaining these would be valuable for me.

Reflection on learning style:

When I look at my learning style the first thing I notice is the absence of "reflection". This is interesting because I actually teach a course on reflective practice, but perhaps this suggests I am not doing it myself. I thought that this was a mistake, but when I did the next exercise, giving feedback to others, I also noticed that the sort of feedback I gave was far more practical, empathic, or analytical – not reflective. This is interesting. Perhaps this is an area of myself I need to explore more.

Using the model to improve dialogical inquiry

Often in adult learning, learners are encouraged to share experiences with each other from their own contexts. This builds the capacity to relate and make sense of experiences, but also has the danger of entrenching people in their own views. A challenge for facilitators might be how to extend the learning and get deeper conversations. A facilitator using the dialogue model can sense whether people are operating from limited aspects on the map and “nudge” them into other ways of inquiring by asking generic questions that come from different parts of the dialogical inquiry map. For example, Analysing: *Are there patterns, themes or similarities amongst stories?* Theorising: *Are there common reasons or drivers?* Imagining: *Can you imagine other possibilities?*

The dialogue inquiry model can become a shared tool that both teachers and learners use to generate questions and perspectives that they may not have previously considered. The model can be used not only as a prompt to inquiry but also after a conversation to help build awareness in learners about where they have been and where they might go in future.

Reflective questions to use after dialogical inquiry:

- *What aspects of the map did we visit in our inquiry? What other aspects could have helped us?*
- *What do we value about this tool? How might we use it more successfully in future practice?*
- *Does it reflect what we value about effective dialogue, or inquiry? What is missing? How did it limit us?*
- *How might we modify the tool to better meet our purposes? What other tools might now take us further?*

How might you modify the inquiry map for your own context by using context specific questions?

How do we know when the dialogue is good?

As we become more observant and mindful about dialogue we can begin to see more nuances and build up our own indicators of what we value, develop theories of what is happening and design tools or practices to help further promote good dialogue. A simple approach to building effective dialogue in classes is to state your appreciation of what you valued “I very much valued that conversation, I think we were able to tease apart some key issues. I now have a very different perspective on...” and encourage your students to do so.

Example of what good dialogue might look like and enable:

- **Ability and commitment to create shared meaning** – construct understandings, shared language, using humour and small talk, creating shared spaces, openness, moving into perspectives of others, engaged in hermeneutic process.
- **Rigour in thinking** – moving around the inquiry “cycle” into different voices and modes of inquiry while applying critical thinking and iterativeness.
- **Tuning into the different stages of idea development** and facilitating mindfully in that process, using openness to new ideas and criticality appropriately.
- **Being inclusive and caring of others** – listening, being empathetic, giving time, recognising and meeting the different needs of others.
- **Being self-reflective of the dialogue process** – meta-cognition recognises the limitations, can name and challenge what is happening and move to alternative discourse methods.
- **The product of the dialogue** – new ideas, new or deeper understandings, deeper relationships
- **Personal development** – participants experience transformation into more dialogical ways of knowing. Able to hold competing perspectives.

Giving feedback

Feedback can be a summative process where learners are told where they have gone wrong and what they need to do in future. It can also be a shared inquiry where students are encouraged to explore the issues with the facilitator. By visiting different aspects of the dialogical inquiry map they can both create greater insight. The map can act as temporary scaffolding to change behaviours and open up to more expansive self-generative and self-reflective questions.

Compare the two dialogues that follow. In Feedback 2 the facilitator is not procedurally using the dialogical inquiry map; rather their experience with it in the past has expanded their sense of what questions to ask. They have created space for the student to be more honest, reflective and open to learning.

Example: Clinical facilitator gives feedback to a student

Feedback 1:

Facilitator to nursing student: “You have left your clinical preparation area in a mess. This is not on. Do not do it again.”

Student: “Yes, sir.” Thinks – why are you scolding me? I am feeling so stressed.

Feedback 2:

Facilitator to nursing student: I notice you weren’t able to clean up your work area. Are you aware that it is important to do so? Was there a particular reason?

Student: Yes, I understand that it is necessary for safety reasons, and I was horrified to leave sharp objects lying out there, but another doctor pulled me away before I could finish, it was all very fast.

Facilitator: Yes, I can understand that happening, I imagine it would be difficult to tell him no.

Student: That’s right. I wasn’t sure whether I could tell him “No, I have to finish here.” I wasn’t sure whether the doctor had a right to pull me away or not.

Facilitator: Well that might depend on a number of factors. We can look at how you could develop some criteria to be more discerning about whether to go with a doctor straight away, perhaps understanding the assertive politeness protocol, but I am wondering also whether you were cleaning as you were going?

Student: Yes, I can see that would be a good option, I wasn’t fast enough, didn’t know where everything was, so I found it difficult to clean as well as be as quick as I needed to be with the patient. I guess I need to better familiarise myself with where everything is kept, and what the different bins are for. But I would like to know what to say to doctors.

Facilitator: I think also, now that you are alert to these issues it would be a good idea to notice how experienced nurses manage the cleaning and the doctors. Consider it as collecting data. Meanwhile, you have given me a few things to think about also.

Designing learning experiences

Teachers and learning designers can use the dialogue model to design activities by thinking where they might start the learning activity – should it be experience first, or theory, or a real problem, or hearing a personal story? However, where you start might push learners into particular ways of tackling things. For example, learners who are required to read a case study and were asked “*What would you do?*” might right away work out what they would do (Applying) without necessarily thinking things through first – such as considering the perspectives of the people involved (Imagining) or wondering about the reasons behind what these people were doing (Theorising). The facilitator’s role is then to “nudge” students to other aspects of the map. The designer can take this into account in their design.

Example: Designing science experiments for first-year university students

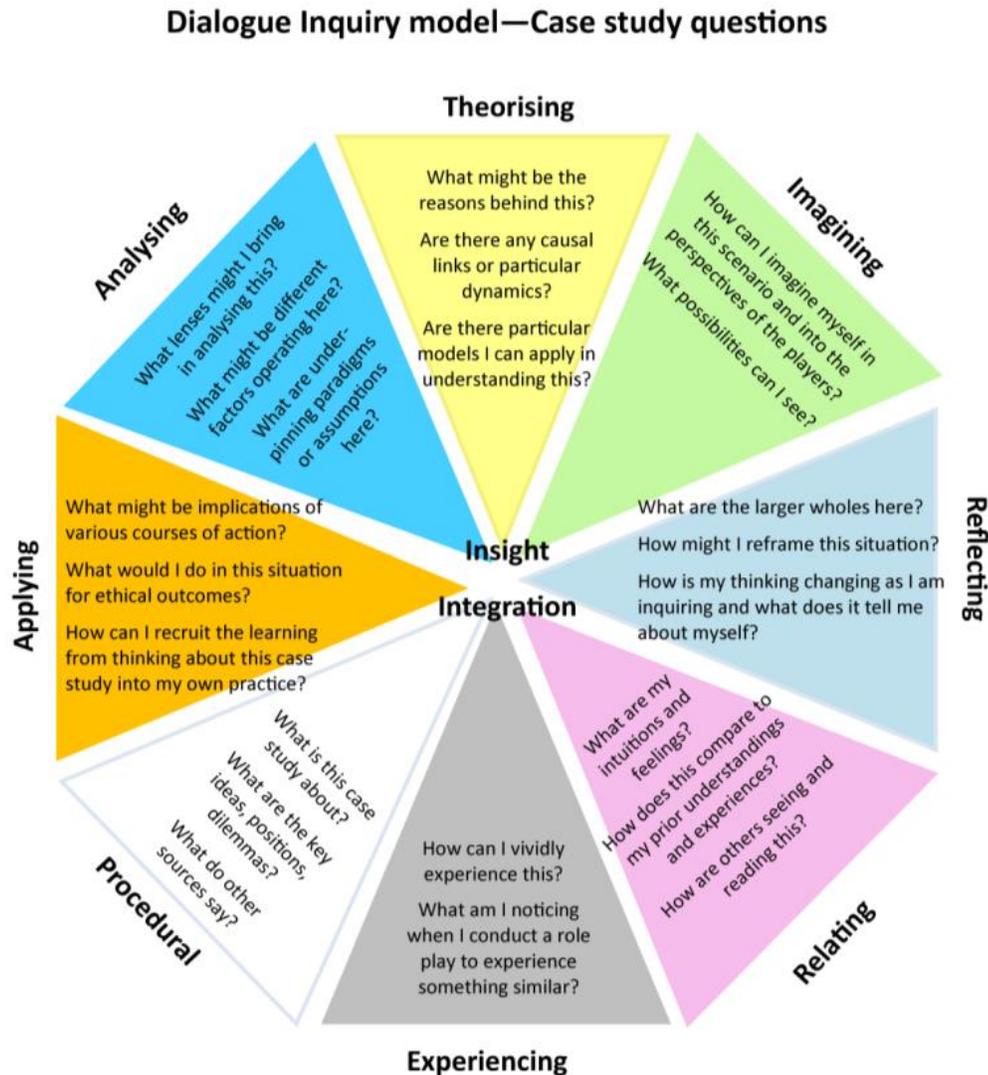
We wanted to re-design science experiments so that students could choose four over a period of eight lab sessions. We wanted to give them not just a broad range of experience in content areas, or measurement processes, but also in the scientific inquiry processes that they might encounter in the profession. We used a scientific inquiry version of the dialogue model to analyse the existing experiments. Most of them were very instructional and linear – provided theory, gave a method and required students to collect data and analyse it – very traditional processes that did not build problem solving skills or represent what scientists often do.

We realised that each experiment lent itself to building particular problem solving skills. For example, some required pinpoint accuracy and adherence to set procedures (procedural), some enabled students to design their own method (imagining), some required a highly theoretical understanding before you could start (theorising), others could be framed as applied problems (applying).

We found that students were extended as a result of the new experiments. Some less able students who were comfortable with following the usual guided instruction were initially anxious and fearful of failing when required to come up with their own designs or theories. Others enjoyed the freedom and the challenge. The assessment was based on providing one lab report, a presentation to the class of one experiment, and a process reflection against the scientific inquiry map. However, the more traditional-minded students found it difficult to make the shift to valuing the development of their inquiry skills, versus valuing getting right answers, even though the facilitators had made the shift.

Case studies

The questions in the figure below were developed by looking at the online discussions of students in a vocational teaching programme who were considering a case study. They represent the sort of questions the students and the facilitator explored in developing rich understandings over the course of the two-week discussion. In looking at the development of the discussions some students stood out in their first contribution because they had considered many aspects of the map in coming up with an opinion. Some students gave fairly orthodox responses while others drew on perspectives that injected new ways of framing the issue. As a result of iterative process of dialogue many students were able to deepen and broaden their understanding beyond initial starting points.



Origin of the model

Dr Sue Stack initially developed this model to assist Year 12 and first-year university Physics students to improve their scientific inquiry process in conjunction with other meta-cognitive practices. It was adopted by some university Physics lecturers and tested with some top-level Australian scientists engaged in collegial dialogue. It was later further adapted by Dr Helen Bound and Dr Stack for online learning facilitation and is continuing to be refined for new contexts.

Dr Stack explains how she developed the model:

“In listening to Physics students’ conversations I realised that when I asked certain questions students would be engaged in inquiry and then after a while stop. I was keen to empower them to generate their own inquiry. I would then go around and ask, *“What were the questions they generated that were useful in their inquiry?”* We began to see a pattern of good questions which weren’t necessarily connected to a linear notion of a scientific investigation. I then thought deeply about what it meant to be a scientist and the different inquiry spaces I had visited in my own work as a paper mill engineer/scientist. I began to realise that there was a side to doing science that wasn’t covered in the typical scientific investigation representations, which were often a sequence of steps. These “extras” included using imagination, conversations, intuition, and fuzzy thinking. These were the invisible glue that helped to make my science inquiry work, and indeed that of other scientists. It wasn’t in a set sequence.

“I then realised the similarity of what we were valuing in terms of processes and questions to whole brain learning models and wondered if I could adapt them for a scientific context. So I created a specific scientific inquiry model for my students to use when they conducted investigations. I saw students’ inquiry deepening and achieving considerable rigour. Students told me that they often preferred certain inquiry modes; some simultaneously drew on different modes. Some teams initially struggled because people were too different, or too much the same. Team members began not only to become empowered in asking questions, but also taking more responsibility for appreciating and melding the individuality of the different team members and building communities of inquiry. Students’ understanding of the content of the course expanded way beyond what they needed for the exam and generated lively and continuous conversation and debate beyond the classroom. They didn’t need the inquiry map as a tool after three weeks, naturally creating their own questions. It was temporary scaffolding. It is important for a teacher to know when the students are beyond the tool – that the tool was useful for a particular stage.”

[Further reading](#)

Limitations

Like any model, this has limitations. It captures a part of the story in a certain way. Some people might see it being a useful stepping stone in expanding awareness, while others might be concerned it is too limiting. In using it with students it is important to allow them the opportunity to critique the model, explore its usefulness and decide whether it is useful or not for them personally or for a shared mental model. The learning style models that this drew from have received critiques in how representative they really are as well as the way that they have been used.

The following “*cognitive challenge*” process is a useful one for building student skills and comfort in using new ideas or processes and can be used in introducing the dialogue model:

1. Do you understand it?

- Is the language accessible?
- Is the structure easy to understand?

2. Is it plausible?

- Different criteria might be used: Is it consistent, coherent, logical, evidenced, trustworthy, authentic, meaningful, practical, explanatory, deep, whole, adaptable, meta-aware? Does it feel right, match your experience, have potential?

3. Is it useful?

- Does it enable you to do, think, feel or grow in ways you wouldn't normally be able to do?
- Is it memorable and can be easily related to?
- Does it bring joy?
- Can you manipulate it to your own purpose?
- When might be appropriate times to use it?

4. Do you believe it?

- How does it position you or limit your thinking?

Further reading

Atkin, J. (2000). An outline of Integral Learning. Retrieved on 24/09/2012 from:
<http://www.learningtolearn.sa.edu.au/Colleagues/files/links/IntegralLearning.pdf>

Kolb's learning model: The experiential learning cycle – a brief introduction to the model. Retrieved on 24/09/2012 from:
<http://www.learningandteaching.info/learning/experience.htm>

Kolb's website and access to the inventory. Retrieved on 24/09/2012 from:
<http://learningfromexperience.com/>

Stack, S. (2007) The dialogical classroom, in *Integrating Science and Soul in Education (PhD Dissertation)* Retrieved on 24/09/2012 from:
<http://www.stack.bigpondhosting.com/thesis/PDFs/ch%209%20dialogical%20classroom.pdf>

Acknowledgements & Background



This resource has been prepared by Dr Sue Stack (pictured, top) as part of the Tools for Learning Design project building on work with Dr Helen Bound (bottom). Thanks to the participants of the project who provided valuable examples.



This and other content related to the Tools for Learning Design project can be found on the Tools for Re-imagining Learning website, a resource for trainers, curriculum and learning designers, and training leaders in the Singapore Continuing Education and Training sector interested in deepening understanding of their practice to create innovative and enlivening possibilities for their adult learners.

The Tools for Re-imagining Learning website and the Tools for Learning Design project overview can be found at www.ial.edu.sg.

For more information on the Tools for Learning Design project or the Tools for Re-imagining Learning website (content), please email Dr Stack at susan.stack@utas.edu.au or Dr Bound at helen_bound@ial.edu.sg.

We welcome questions or feedback on this publication, the Tools for Learning Design research report or the Tools for Re-imagining Learning website (layout or technical issues). Please email research@ial.edu.sg.

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