3.3 Develop expert learners: Explore the construction of knowledge

Essence >

The teacher shows that knowledge is open to question, serves particular purposes and is shaped by culture and experience.

Aboriginal learners connecting to country

I couldn't believe it-we had won! We didn't win just the state competition but the national one as well! What had started as an idea to help our Kaurna students reconnect to their country had blossomed into a full-on community project. Without a shadow of doubt, the learning outcomes and social benefits surpassed all our expectations.

It all started in 2003 when we began to develop a wetland area on the Kaurna Plains school site, with the intention of increasing students' cultural pride and understanding. Over the next two years, as the students worked and talked together, their shared cultural knowledge grew. They watched their wetlands become a living environment, and their questions flowed.

Like our Kaurna Plains students, most Aboriginal learners live in urban areas and, whilst many still retain a cultural connection to their country, many children and students find it difficult to experience and maintain cultural practices and develop a sense of identity. They live in cultural dislocation, and often 'learning about' that identity is the nearest they come to understanding.

Connection to country is evident in the more remote areas of Australia where traditional practices live on, but still there are challenges to face. Even though cultural knowledge and understandings are stronger in these areas, Aboriginal learners are required to move between two cultural worlds.

The secondary students were going to bring their two cultural worlds together. They started on the reconnection project. To grow cultural identity and understandings we developed a strategy which would bring together the wisdom and knowledge of Kaurna elders in the community with that of the students. By listening to and discussing the community stories and elders' oral histories, students could build on their existing understandings and compare with each other. For many students this was the first time they'd heard and made personal connections with things they'd 'learnt about'.

The students worked with a strong shared sense of purpose to produce a DVD entitled Cooking Kangaroo Tail. They learned how to dig an earth pit which became the cooking oven. To explain its cultural significance, they wrote a script, acted, filmed and then edited the footage. Watching their final product, there was a tangible sense of moving freely between two worlds. The students submitted their DVD to Panasonic in a nation-wide competition. Being chosen as winners of that national competition was powerful acknowledgment of their identity.

Having the wetlands on the school site has breathed life into learning. There is new knowledge, wellbeing, cultural understanding and connection to country. For me it is no longer just a 'head connection'-it is a 'heart connection'.

Senior secondary teacher

Key actions: Teachers

- Guide my students to understand that all individuals and groups have their own unique perspective on the world, and that their core beliefs and experiences influence the way they construct and value knowledge
- Compare and contrast cultural understandings (eg creation stories), attitudes and conceptual understandings from different time periods (eg belief in a flat earth) to demonstrate that knowledge is a cultural, social and political construct that can change with time and circumstance
- Stimulate rethinking by introducing contentious issues for students to question their own underlying assumptions and to have the opportunity to change their minds
- Structure investigations that enable students to identify bias and racist/sexist/class conscious attitudes in the community and the media
- Explore how each discipline has its own focus and constructs knowledge through its own processes and methods (eq compare the way scientists explore and express knowledge of forces with the way an artist would explore and express forces)

Key actions: Students

- Listen carefully to others' ideas and try to see them from their point of view
- Ask questions: 'Why would they think this way?', 'Who might say this?' and 'Is there another way that someone might see this?'
- Use a variety of different research skills and ask myself: 'How reliable is this information?', 'Whose interests are being served?', 'What was the author's purpose here?' and 'Is there any bias?'

- Challenge my students to consider what they don't know by exposing them to new ideas or perspectives
- Elicit students' responses to 'Why is this worth knowing?'
- Target discussions where students share perspectives and give and receive feedback on their ideas
 - Explicitly teach skills and create opportunities for students to disagree with ideas and/or each other in appropriate ways
 - Teach students to critically analyse information and primary sources of data from a range of sources and for specific purposes
 - Actively seek out online opportunities for students to compare beliefs and perspectives with other learners, wider society and experts
 - Deepen students' understandings of the past and present as a means of influencing the future
 - Design activities that encourage and actively support students to be 'apprentice' historians, scientists, writers, artists etc
 - Use graphic organisers such as mind maps to work out the links between ideas
 - Challenge people's ideas in ways that are not threatening
 - Express ideas in different ways by asking myself 'How would I communicate this idea in science?' and 'What if this was creative writing?'



explore the construction of knowledge

Knowledge is a story that works.

Justice alert

What cultural constructs are dominant? Whose assumptions and core beliefs are affirmed and whose are threatened?

Ways to explore the construction of knowledge

Human graph: Each student considers the issue in question, then stands on a spot along a continuum that moves from 'strongly agree' through to 'strongly disagree'. When asked, students justify their position. After hearing others' views, they may wish to change position.

Thinking scaffolds: Students use strategies such as Venn diagrams

to compare and contrast knowledge from different perspectives, times and places. For more thinking scaffolds, go to

<http://www.eduplace.com/graphicorganizer/pdf/venn.pdf>.

Fact or opinion: This is one way to support students to consider whether things they say are facts, opinions or a combination.

Fact or opinion

Write your topic and the information you know. Add the details to the columns. Talk with others to check your ideas.

Topic

| Tupic. | | |
|--------|---------|----------|
| Fact | Opinion | Not sure |
| | | |
| | | |
| | | |

3 2 1 Strategy: Students can follow these steps to clarify their thinking:

3 ideas I want to discuss

- 2 questions I want to ask
- 1 action I want/need to take

Knowledge interrogation: Provide opportunities for students to explore assumptions underpinning different perspectives, search for problems, generate ideas, and develop a critical attitude.

Debates: Pose a question for debate and allow students a class session for research or discussion before the debate. Split this preparation time so that they spend the first half gathering information about only the affirmative arguments, and then the same amount of time on only the negative arguments. The debate is conducted

the next session/day. A topic might be 'Human nature: Good or evil?'.

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Exploration of cultural and contextual influences: Students could explore cultural and

contextual influences by:

- studying visual art works to gain insights into social changes, beliefs, values or perspectives
- researching medical practices through the ages to find how they reflected people's current levels of knowledge or their superstitions
- analysing languages of various countries to find links and develop hypotheses about the reasons for the links which can then be researched and tested.

Contrasting news reports:

Challenge students to consider events from different perspectives by using a topical current event (eg a natural disaster, a discovery, a great invention, a war). Different perspectives could come from different countries/organisations, or news reports on the same event but from different media sources.

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Viewing card: Use a viewing card (ie a small cardboard frame) on a montage of photos to help students get 'inside' characters from a period of time, or a country, which is distant from their own experience. Students scan the photos through the viewing window, identifying emotions or other features of interest. Discuss why they have picked out these examples and possible reasons for the emotions. What are the similarities with how they view things? (This activity is based on work by Gornal, Chambers & Claxton 2008, p 47.)

Big feet: Make two enormous feet out of different coloured card or material. Choose two volunteers: each stands on one of the feet. The first talks about a situation or problem from his/her point of view. The second talks about the same situation from her/his point of view. Then they each move to stand on the other foot and talk about the same situation from the other person's point of view. (This activity is based on work by Gornal. Chambers & Claxton 2008, p 47.)



Language that teachers can use to explore the construction of knowledge

- Imagine yourself as a person from another culture or time. How might you view this issue differently?
- Now that you've worked with Jane and Lyn, do you have another way of looking at it?
- This text is written through the eyes of ...
 How would it look through ... eyes?
 Can you explain your idea?
- Can you see where these theories connect or disconnect?
- Now you've thought it through, what questions do you have?
- This TV program is targeting ... What are you noticing? Can you detect a bias?
- Why might people think that? What is another view?
- Whose voices are being heard and whose are not?
- How reliable is the source of this information?
- Why have these people reported the information differently?
- Here is a bee. What knowledge would be most important to a beekeeper, a gardener, a scientist, a doctor, an artist, a historian, a geographer or a mathematician?
 - In what ways do I help students construct accurate and useful knowledge about new concepts?
 Am L respecting different wave of learning
 - Am I respecting different ways of learning for students with diverse backgrounds and needs?

This element is not

Knowledge is presented as fact

or the 'truth' and open to only one

Teachers impart knowledge and

Students play 'Guess what's in the

teacher's head?'-questions are

always asked by the teacher with

a predetermined answer in mind

Students are discouraged from

Students who raise contentious issues

or disagree are considered difficult,

are discouraged, or are 'shut down'

The views of the dominant culture

strongly influence planning, programming and implementing learning tasks

discussing or questioning

Practice check

of other points of view?

• Am I modelling open mindedness,

willingness to listen and consideration

• How do I respond to students' misconcep-

tions about the world and what strategies

do I use to challenge their conceptions?

discuss and question new ideas vigorously?

• Do I give opportunities for students to

demonstrated if:

interpretation

students listen

 How do I let students know its okay to ask me questions and challenge what is being said? Does my language encourage critical feedback?

Notes:

knowledge is not neutral

3.3

Understanding is developed when key ideas and skills are reiterated, explored and rethought. These key ideas and skills need to have value beyond the classroom and to be linked to real world issues, so that students are engaged in processes of inquiry and problem solving that have some meaning to their own lives and to the issues facing contemporary society.

Grant Wiggins & Jay McTighe

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