4.1 Personalise and connect learning: Build on learners' understandings



Begin with what we know

Several years ago I attended a 'Teaching about Other Places' workshop at the Global Education Centre (SA). The focus on concept-driven learning resonated with me. This was an approach I really wanted to explore with my students.

Back in the classroom, I thought about how they would respond best to the new challenge. I gathered some basic resources: an unmarked world wall map and the ever-popular 'sticky notes'. The initial task was an open invitation: 'How many countries can you think of? Write each one on a sticky note and then put it where you think it belongs on the world map'.

That captured their imagination. Sticky notes were being stripped frenetically, dialogue was animated, and the map filled rapidly with a patchwork of place names-countries, continents, states, regions and cities.

Then the debate began. Which ones were countries and which weren't? Their knowledge was impressive, but already they were realising how much they didn't know. I was able to draw out their misconceptions.

Rather than send the students straight to a definitive source for answers, I asked them to form small groups. Providing only one

sticky note per group, I posed the questions, 'What is a country? Can you give it your own definition?'.

Discussions were intense, reflective and purposeful. The students were constructing their own conceptual understandings. We compared definitions and guestioned, clarified and refined each other's thinking. Sticky notes were juggled around, rewritten, moved or removed altogether. That school term, the world map was the focal point.

We went on to create our own 'countries', exploring general concepts of world geography, exploration and migration, citizenship and cultural identity, government, economic growth and tourism. With each deeper understanding, students were ready to make links to new, explicit learning about the world. We had laid the foundation for a rigorous learning journey.

Over the years I've introduced 'Learning about Other Places' to three different classes, and each group has brought to the task its own unique perspectives and dimensions. Each time the journey has been a new one-it's always different because they are different.

Country primary school teacher

Key actions: Teachers

- Value prior knowledge as fundamental to new learning, seek out what the students already know, can do and understand, and use this to inform planning
- Approach a new topic openly with students, discussing why we need to explore it, how we will share the learning and how we might use it in the future
- Capture and record these initial responses as a starting point for mapping the shared learning journey
- Ensure that all ideas are acknowledged, misconceptions explored and deliberate guidance towards accuracy provided
- Pose guiding questions and listen closely to each student's response, to elicit understanding
- Support learners to identify and clear up basic misunderstandings
- Find hooks to create student interest and meaning making by responding to students' energies and enthusiasm

Key actions: Students

- Talk with my friends and teachers about what I already know and what I need to know next
- Record what I know and understand by writing, drawing or other ways that show it best
- Listen to other people's ideas and compare them with mine

to my family and my life

the class

don't know

and questioning



 Deepen students' curiosity by linking new meanings to what they already know, and discuss how each of us may see these links in our own unique way

• Challenge students to question what they

• Use visualisation, mind mapping and concept maps to capture students' thinking

• Help learners to build on each other's understandings by teaching the skills of reflective listening, paraphrasing

 Teach skills that enable students to show their understanding in a range of ways such as writing, artwork, practical tasks, roleplays and multimedia presentations

• Design learning challenges that are open and stimulate further questions

• Develop processes for students' active, ongoing reflection (eg where they have come from, what they now know, and where their new learning will lead)

• Use technology to talk with others beyond

• Ask questions to help me understand better • Think about how my new learning connects

Justice alert

Whose prior knowledge and cultural practices are seen as valid for building upon?

Ways to build on learners' understandings

Graphic organisers: Use visual ways to connect with what students already know and understand, so that misconceptions can be explored. Examples are:

- Mind Maps
- Lotus Diagrams
- KWS (what I Know, Want to learn, and possible Sources). Graphic organisers can be sourced from

<www.teachervision.com/graphicorganizers/printable/6293.html> and <www.education oasis.com/curriculum/ graphic_organizers>.

Reflection partners: Students work with a partner to reflect on their learning. Useful starters are: 'I know what I'm learning about because ...', 'I could use this learning elsewhere by ...', 'This is my understanding ... This is how I got to it ...', 'I came to this conclusion because ...', 'I heard you say ... Is this what you meant ...?'.

Correlation chart: This chart can be used for evaluating relationships between factors through looking at responses from a group and showing areas of agreement and difference. On a graph, the axes represent the two factors and each axis has a continuum. For example, when reviewing a task or new topic:

- X axis—'what I learnt' with a continuum of nothing, something, quite a lot, heaps
- Y axis—'how useful it will be for me' with a continuum of not at all, quite useful, very useful, extremely useful.

Students stick a coloured dot at the point that captures their own response. The results can inform further learning and planning.

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... the challenge for educators is to help individuals construct, for themselves, the understandings that other minds have discovered before them. Left to chance, or open discovery, my belief is that you would have to be Einstein, or Einstein-like, to discover what he discovered.

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Gallery walk: This technique can be used to share work/ideas on a central theme. It enables 'piggy back' thinking to build consensus/ connections between ideas. Display students' work/ideas as in an art gallery. Agree on a focus for the viewing (eg generating/adding ideas, feedback, writing questions). Students spend dedicated time in the gallery. Individuals or groups move from one exhibit to another, using the agreed focus to discuss/respond to the exhibits.

DIY museum: Students create a display of artefacts with 'question labels' rather than information labels. Classmates can then develop labels on the basis of their own prior knowledge and inference (not research).

- Light—who needs it?
- Time—is it the same for everyone?
- Taste—how do we change it?
- What can't we measure?

After students choose a brainteaser, ask them what they make of it, what is the big concept, how much do they already know about it, and how many ways can their thinking go. Have fun with all the interpretations and build new knowledge together.



Language that teachers can use to build on learners' understandings

- What is the meaning of ...? Can you give it your own definition?
- How does this fit with your experience? Can you see the connections with ...?
- What else do you know about ...? Is there a link between ... and ...?
- How is this different from what you thought or felt before?
- Can you explain a bit more about ...? What is another way you could say that same thing?
- $\,\circ\,$ What might be some different perspectives?
- What strategy could you use to develop this idea? How could you find out more about it?
- How and when can we use this new information?
- What if ...? Could you predict ...?
- Why might this be important for you in the next stage?

This element is not demonstrated if:

There is an assumption that, for students to learn, the teachers have to impart the knowledge to them The teacher plans learning tasks without first considering students' prior experiences as an important part of the planning process

Knowledge is viewed as only content facts or topics—rather than concepts, personalised understandings and beliefs Students are disengaged or cannot see

relevance in what they are learning Teachers ignore current technologies and students' expertise as powerful mediums for new learning

All students are expected to show their understandings in the same way

Practice check

- What opportunities do my students have to share ideas and show what they know?
- How have I used students' prior knowledge when planning and programming?
- To what degree do I consider my students' cultural differences?
- How do I respond when my students demonstrate misconceptions and need to explore new meaning?
- Do I use questioning techniques to build on the complexity of their understandings (eg Bloom's Taxonomy)?

Notes:



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In a constructivist classroom the teacher searches for students' understandings of concepts, and then structures opportunities for students to refine

opportunities for students to refine or revise these understandings by posing contradictions, presenting new formation, asking questions, encouraging research, and/or engaging students in inquiries designed to challenge current concepts.

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We confuse the need for the child to construct her own knowledge with a form of pedagogy which sees it as the child's responsibility to achieve that. We focus on the action of the student in the constriction of knowledge, rather than the action of the teacher in engaging with the child's current misconceptions and structuring experiences to challenge those misconceptions ... The constructivist theory of knowing has been used to justify a non-interventionist theory of pedagogy, whereas it is a fair interpretation to argue that constructivism requires vigorous interventionist teaching: how, after all, is a student with misconceptions supposed to challenge them unaided? How does she even know they are misconceptions?