Learning by Design: a language for revealing, documenting, reflecting-on, sharing, discussing and designing pedagogical practice.

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The theory and underlying pedagogies of Learning by Design have been brewing and developing for a very long time, taking shape and evolving in the writing and theorising of Kalantzis and Cope.

the evolution of Learning by Design
Learning by Design grew out of the Multiliteracies work and its emphasis on diversity, multimodality and pedagogy. The Multiliteracies pedagogies are the antecedents of the Knowledge Processes of Learning by Design.
The term Multiliteracies refers to a perceived need for people to be literate in more than just language; the theory of Multiliteracies recognises a multiplicity of communications channels and media and an increasing salience of cultural and linguistic diversity. Pedagogies based on the theory of Multiliteracies acknowledge and work with multiple modes of representation.

The Multiliteracies framework

The Multiliteracies framework has a strong focus on pedagogy. Pedagogy is the how of teaching and learning. It is the combination of processes and practices employed by teachers as they teach and the learning relationship that these processes and practices afford.

It is through pedagogy that the teacher, or the materials used by the teacher, bring about learning and knowing in learners. Pedagogy is the process through which teaching and learning occurs and it is the intersection at which teachers and learners meet.

The Multiliteracies framework is concerned with multiple facets of learning: it was designed to address learner diversity and lifeworld differences; it accommodates and promotes a mix of progressive, traditional and critical pedagogies; it recognises and acknowledges multiple literacies; and it promotes multiple modes of meaning making - linguistic, visual, aural, gestural, spatial and kinaesthetic.

The Multiliteracies framework identifies four types of pedagogy: situated practice; overt instruction; critical framing; and transformed practice. As a means of addressing learner diversity the framework promotes the use by teachers of all four pedagogical types and multiple modes of meaning-making.
The Multiliteracies pedagogies

Situated practice: This pedagogy promotes immersion in authentic, real-life experiences and promotes direct participation as the primary means of learning. Typically learners experience first-hand, and in embodied ways, how something looks, sounds, feels, smells or tastes. This means the learner directly experiences new ideas and is prompted to connect these new ideas to existing experiences and to their lifeworld. Learners are encouraged to make their own meaning; to collaborate, engage in dialogue and learn from and with colleagues and peers. Practical exercises, group work, field trips, workshops and excursions are characteristic of this pedagogy.

Overt instruction: This pedagogy involves the learner in learning concepts and the names and/or meanings of things; how these things function, their roles and purposes; and the theories to which they are related and make possible. In a traditional setting this pedagogy takes the form of the teacher as expert instructing students as to the names, meaning and function of things. The desks-in-rows classroom, teacher-at-the-front, textbook, printed-guide and handbook are familiar pedagogical supports for overt instruction in traditional settings - in such settings students may learn in company with others but are usually tested individually.
The Multiliteracies pedagogies (cont):

Critical framing: This pedagogy involves learners in questioning and analysing the significances, consequences and impacts of what they are learning - asking questions such as 'Who are the winners and losers here?' 'Who is affected by this and how?' This pedagogy involves learners engaging in dialogue, discussion and debate about the meaning, purpose and effects of the ideas they are exploring. It is through use of the critical framing pedagogy that learners develop a deeper understanding of the phenomenon of study and its consequences. This pedagogy is typified by asking questions - delving deeper - facilitating analysis and reflection, and engaging in dialogue, discussion and debate.

Transformed practice: This pedagogy involves learners having opportunities to demonstrate their understanding and apply what they have learned - both appropriately and creatively - and receive guidance, critical advice and feedback. By designing-in such opportunities the learning is anchored in the learner's experience - the learning becomes part of their store of knowledge and know-how. This pedagogy is typified by coaching, mentoring, guiding and the provision of critical feedback by teachers, peers and expert others.
The most recent book ‘New Learning’ and the Masters of Education program in which you are enrolled are the consequence of an evolutionary process of theorising, practising and researching.
In the next section Learning by Design is explored and elaborated.
Working with *Learning by Design* means being thoughtful, reflective and prepared to explore new territories.

It also means being a learner, a designer and a researcher: documenting, reflecting on, and systematically exploring teaching and learning.

It provides a language for becoming such a being.
Learning by Design is about theory & practice.
It is a set of working lenses through which to look at, explore and think about one’s practice. And it is a set of organising ideas that affect how we perceive, talk about, understand and plan what we do.
Learning by Design is about choosing and deciding...
The pedagogical lenses of Learning by Design augment our seeing...
We can choose when and in what ways we use those lenses, or choose not to use them at all.
Learning by Design, a professional language...

The Knowledge Processes of Learning by Design are the names given to eight different pedagogies - each of these pedagogies has a unique character and focus and is deployed to achieve a specific purpose or intent.

The naming of these pedagogies allows us to work with, discuss, analyse, plan and design teaching which is deliberate and purposeful, i.e. learning by design.

Having a shared professional language means that teachers can understand each other more clearly. It becomes easier to collaborate and to create designs which can be shared with, and used by others.
In this diagram the links between the eight Knowledge Processes of Learning by Design and the earlier pedagogies of Multiliteracies are made explicit.
The Knowledge Processes

Experiencing
- the known (situating learning in what learners already know)
- the new (introducing to, or immersing learners in, new experiences)

Applying
- appropriately (applying what has been learned in appropriate ways)
- creatively (applying what has been learned in creative ways)

Conceptualising
- by naming (learning the names and meaning of key concepts)
- with theory (understanding how these concepts connect to theory)

Analysing
- functionally (understanding the purpose of something)
- critically (understanding the consequences of something)

The evolution of the Multiliteracies pedagogies to the Knowledge Processes of Learning by Design represent a shift toward practice and a concern for being able to operationalise and enact the pedagogies.
Experiencing the known/experiencing the new builds upon the tradition of experiential learning drawn either from students' varied lifeworlds or through new experiences that recognise their subjectivity. It is based on the recognition that learning is highly situated in a social and cultural sense and that learning must operate within a 'zone of proximal development', generally this involves a movement from that which is known to that which is new.
The Knowledge Processes

Conceptualising by naming/conceptualising with theory involves systematic, analytic and conscious understandings, requiring the introduction of abstract, explicit, conceptual languages to describe the underlying structures of meaning. In terms of the L-by-D framework this means conceptualising by naming, concepts that abstract, generalise, and link to form discipline-based theories.
The Knowledge Processes

Analysing functionally/analysing critically requires students to interpret the social and cultural context of knowledge. It encourages learners to reflect on their work from a variety of analytical and critical perspectives and to consider and question the purpose, function and beneficiaries of various concepts or theories.
The Knowledge Processes

Applying appropriately/applying creatively relates to the transfer in practice of meaning-making, where knowledge is applied to new contexts or cultural sites. This builds upon a tradition of applied learning (learning by doing) where learning occurs through the transfer of generalisable knowledge from one setting to another. More directly this is conceived as applying knowledge, either appropriately to a context, or creatively via transfer, synthesis or recombination in new contexts.
The Zone of Proximal Development: the journey into the unfamiliar needs to extend from a zone of intelligibility and safety.

According to Vygotsky (1978 p.79) the zone of proximal development is "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers".

Crosswalk #1

The Knowledge Processes

Experiencing
the known
the new

Conceptualising
by naming
by theorising

Analysing
functionally
critically

Applying
appropriately
creatively

Bloom's Taxonomy

Comprehension
Knowledge
Analysis
Application
Evaluation
Synthesis
Crosswalk #2

The Knowledge Processes

Experiencing
the known
the new

Conceptualising
by naming
by theorising

Analysing
functionally
critically

Applying
appropriately
creatively

toughtful
deliberate
design

Kolb’s Learning Cycle

Concrete Experience

Reflective Observation

Abstract Conceptualisation

Active Experimentation
Crosswalk #3

The Knowledge Processes

Experiencing
- the known
- the new

Conceptualising
- by naming
- by theorising

Analysing
- functionally
- critically

Applying
- appropriately
- creatively

The 5Es Instructional Model

Engage

Explore

Explain

Thoughtful Deliberate Design

Elaborate

Evaluate
Crosswalk #4

The Knowledge Processes

Experiencing
the known
the new

Conceptualising
by naming
by theorising

Analysing
functionally
critically

Applying
appropriately
creatively

Our school’s framework

thoughtful deliberate design
The philosopher Ludwig Wittgenstein highlights the importance of being able to name that which we work with, via this simile about an artisan and his assistant.

Suppose that the tools (the artisan) uses in building bear certain marks.

When (the artisan) shows his assistant such a mark, he brings the tool that has that mark on it.

It is in this and more or less similar ways that a name means and is given to a thing.

It will often prove useful in philosophy to say to ourselves: naming something is like attaching a label to a thing.

Wittgenstein 1963, p.74

The terms used in Learning by Design are therefore not just names but ways of making meaning of how teachers teach and how learners learn. The focus of Learning by Design is pedagogy - the how and why of teaching - the terms represent key ideas in a professional language of teaching and learning.

This language takes time to learn as we discovered via our research.
The Learning by Design pedagogical framework was at the heart of two Australian Government-funded research projects (2005-2008).

The research involved fifty teachers from a dozen schools in four different jurisdictions spanning inner city through to remote rural locations in Australia.

The range of contexts revealed different school cultures and practices and served to road-test the effectiveness of the Learning by Design pedagogical framework as well as illuminating and enriching our research findings.

The fifty teachers were enlisted as co-researchers rather than research participants. They played an active role throughout the two projects capturing and collecting data, as well as analysing, representing and communicating their findings to peers and other scholars. They developed research skills alongside the professional teaching skills fostered via their use of the Learning by Design pedagogical framework.

The teachers' development was scaffolded by various purpose-designed support materials and via four collaborative research-workshops each year.

The various materials developed for this online Masters of Education program are a direct product of the two research projects.
Teachers identifying - revealing - documenting - reflecting on - discussing and designing - learning.
There are things that you do Damien that I haven't given names to!

Samantha trying to explain how her teaching partner works in the classroom - Bellevue Park Primary School, Queensland, Australia.
It seems to me that Learning by Design enables you to answer the question ‘What is learning?’ We can say ‘this is learning...that’s learning’ because we have the language.

How do people who don’t have that, answer when they’re asked ‘What is learning?’ ...

You’ve got to have a language, surely as professionals... we’re in charge of pedagogy, if anybody in the world is... and we should be able to talk about it - it should be a requirement of teachers coming out of teacher’s college.

Learning by Design provides us with a language to analyse and discuss what we do and how we do it...and we haven’t really had that before...

Chris - Teacher at Bellevue Park Primary School  Qld
We had a vague sense that something was missing but we didn’t have a name for it this missing thing...

Then Learning by Design came along and we suddenly realised that this was what was missing. We could name it, we could talk about it, we could do something to fill the gap and it was exciting!

*Chris - Teacher at Bellevue Park Primary School QLD*
I still have more to learn about the Knowledge Processes. Pushing yourself to understand more and more. The results you see in the classroom makes it worthwhile. L-by-D is very satisfying. Changes the way you construct activities and plan learning. When the lesson is engaging for students then behaviour problems are almost non-existent...Students become used to challenging ideas and this becomes part of a normal classroom routine.

When in a leadership position this ‘template’ gives you a language to discuss with other teachers classroom management, curriculum and planning. It provides us with tools and language and a lens with which to analyse teacher practice.

Ed - Teacher at Lanyon High School ACT
Asked to reflect on her experiences of applying the Knowledge Processes in her practice Melanie, an early-career Elementary School teacher, responded:

*I ask more of myself as a leader, learner and teacher. I seek more from my students as learners and leaders. The change for me (and my students) is like going from eating a frozen meal to a gourmet feast.*

When I say this I am referring to the fact that when I plan using the framework and plan for the four quadrants I find that my lessons become more creative and engaging as I take the time to choose processes that will maximise the opportunity for student learning and utilise the skills they have.

The language is one of the tools that make the shift into this mode of planning difficult, and yet it is the language that enables us to make the most significant differences with our teaching. Focusing us clearly on the "real" tasks at hand.

With a framework which is this thorough the impact on pedagogical practice is inevitably positive."
The research-workshops were collaborative, participative and reflective spaces in which teachers discussed their designs and their practices - sharing stories and evidence of the impacts of using the Learning by Design framework for themselves and learners.
The research-workshops were collaborative, participative and reflective spaces.
Learning by Design as a scaffold for teaching and learning...

The pedagogical framework, which incorporates and is structured around the eight Knowledge Processes, serves as a scaffold to support teachers as they design.

The framework, particularly in the 'Placemat' form, serves as a space within which to learn, discuss and use the professional language.

The LbyD Placemat offers an environment in which it is possible - working alone, or in groups with post-it-notes - to design units of work which address the diverse needs of learners while employing a range of pedagogies and modalities.
The Learning by Design Placemat can be used to stimulate thinking and reflecting and for scaffolding and mapping out initial designs.
With Learning by Design there's a recognition that learning isn't just a series of tasks!

Using the Knowledge Processes we have to keep asking ourselves 'How does that activity contribute to the learning and to what we want our kids to achieve?"
Learning by Design is about creating, capturing or collecting artefacts for reflection, analysis and sharing...

An artefact is that which is left behind as a trace or consequence, product or evidence of an activity.

In the context of Learning by Design these artefacts could include your designs - Placemats and Learning Elements; the consequences of your teaching; samples of student work which you have analysed and annotated; photographs, films or audio recordings of your teaching practice; feedback from students on their learning; assessment or system records; or any other evidence which illuminates your practice.
Some teachers have begun to explicitly teach their students the meta-language of Learning by Design, reflected here in these artefacts captured by the teacher.
This image, captured by one teacher for another, represents “something important to me about my classroom and the kind of learning which takes place here”. What do you see? How might it feel to be a learner here? How do learners learn around here?
The Learning by Design pedagogical framework which lives inside a Word document.
the Learning by Design pedagogical framework.

teacher resource

Analysing the visuals
Add two more columns to the retrieval chart. Students record the effects of the use of colour, framing, demands and offers, and line. For example in the table students might record that the zombie colours make the animals seem sad. The bright clashing colours suggest the humans are clashing with nature and evoke a cool response from the reader. The framing suggests caging while the lack of framing suggests freedom. The framing also identifies groups and group identity – humans and animals. When the humans become more animal like, they too are framed as a group. The demands make you look at the eyes first when you look at the image. They get the image demands empathy. The humans are on the left hand side (given) and the animals are on the right hand side (new). The information we know (given) is that zoos are for people. The new information is that zoos are not for animals.

Text User

Positioning the audience
Through an individual written reflection students respond to questions about the effects of the visuals on the reader.

Students use a T Chart to analyse the positives and negatives of zoos based on the information presented in Zoo.

student resource

What do the visuals do?

<table>
<thead>
<tr>
<th>Colour</th>
<th>Animals</th>
<th>Humans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Framing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demands and Offers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Focus on left and right sides of each double page spread

How does it affect us?

What do you think about the animals in Zoo?
What do you think about the humans in Zoo?
Are they happy or sad? Why? Why not?
Why has the author made these choices to present the people and animals in this way? Record all the positive and negative messages/ideas about

This is the formalising and publishing phase of the Learning by Design process. More on this later...
Our observations of teachers who engage with Learning by Design in an open-minded and participative way as teacher-researchers - where their teaching-practice becomes the field of research - embark on a journey of professional discovery and development.

We have observed teachers develop to the point where they begin applying the pedagogies - the knowledge Processes - creatively!

the known
experiencing
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At the moment though, you are more likely to be feeling like this...

But that's ok because that's how most teachers feel at the beginning.
Stick with it - our experience, with the many teachers who have worked with Learning by Design, is that it's worth the effort.

Mary, Bill,
Peter & Les