

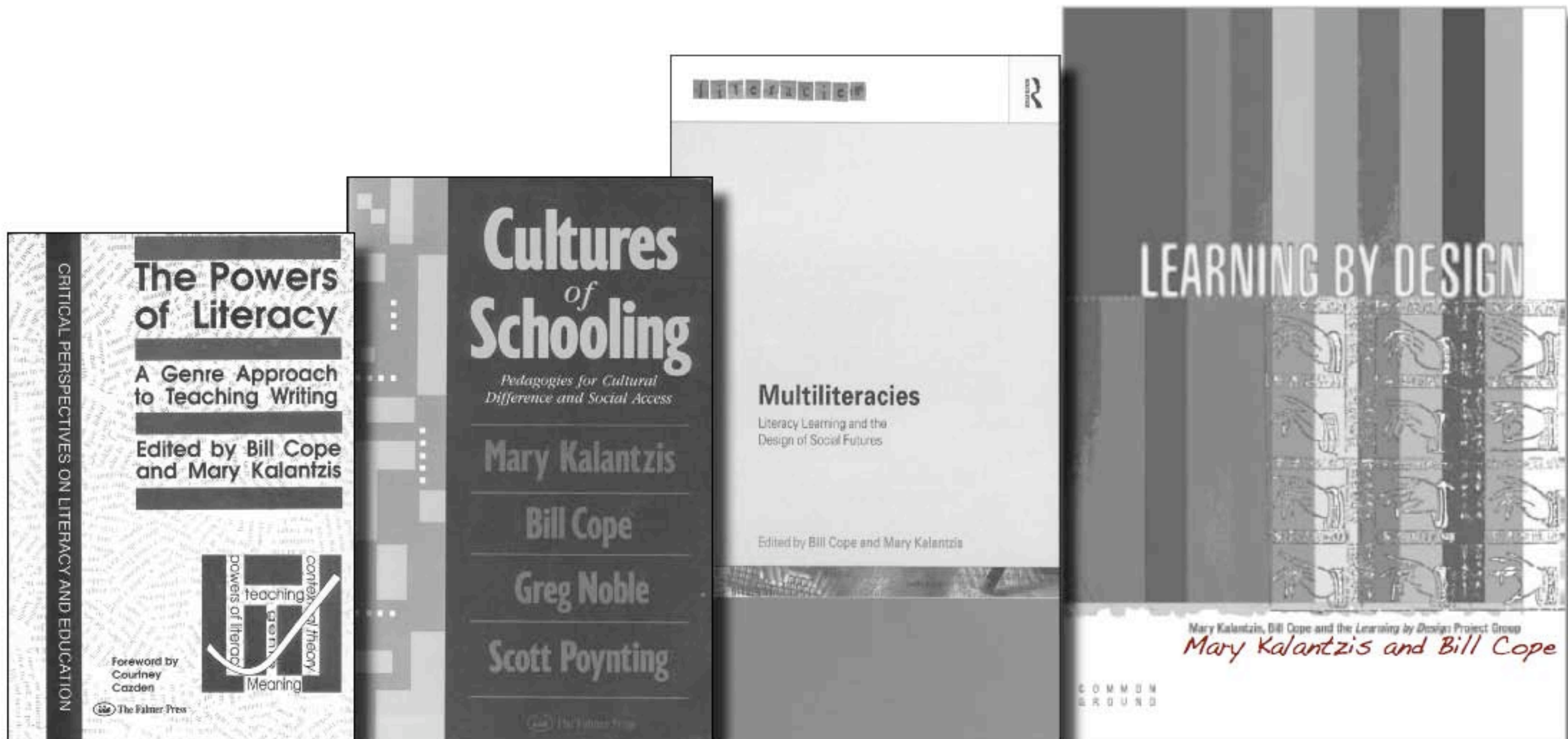


*Learning by Design: a language for revealing,
documenting, reflecting-on, sharing, discussing
and designing pedagogical practice.*

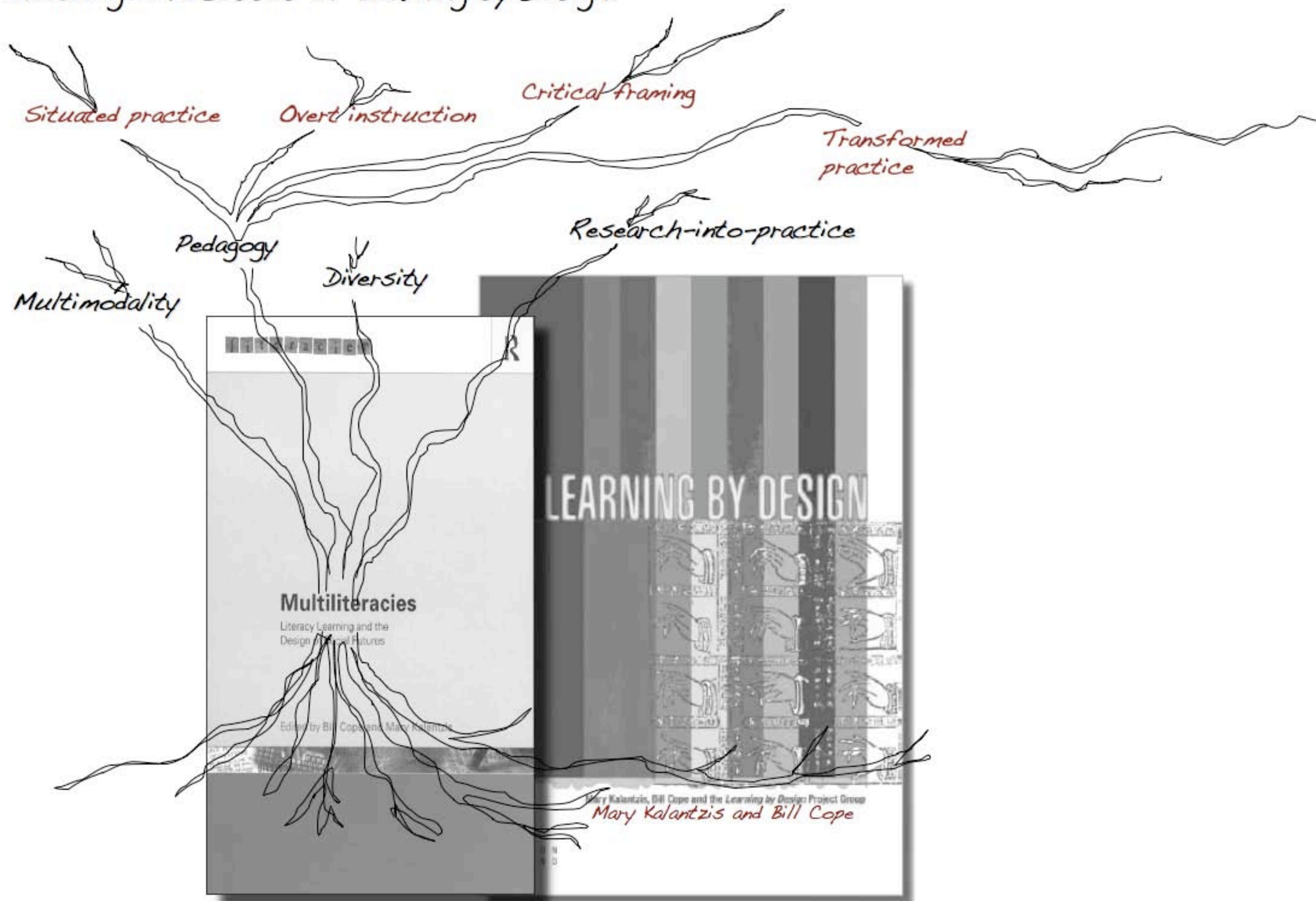
*Created by Dr Peter Burrows & Dr Les Morgan for EPS500 The Capstone Project
Master's of Education - University of Illinois*

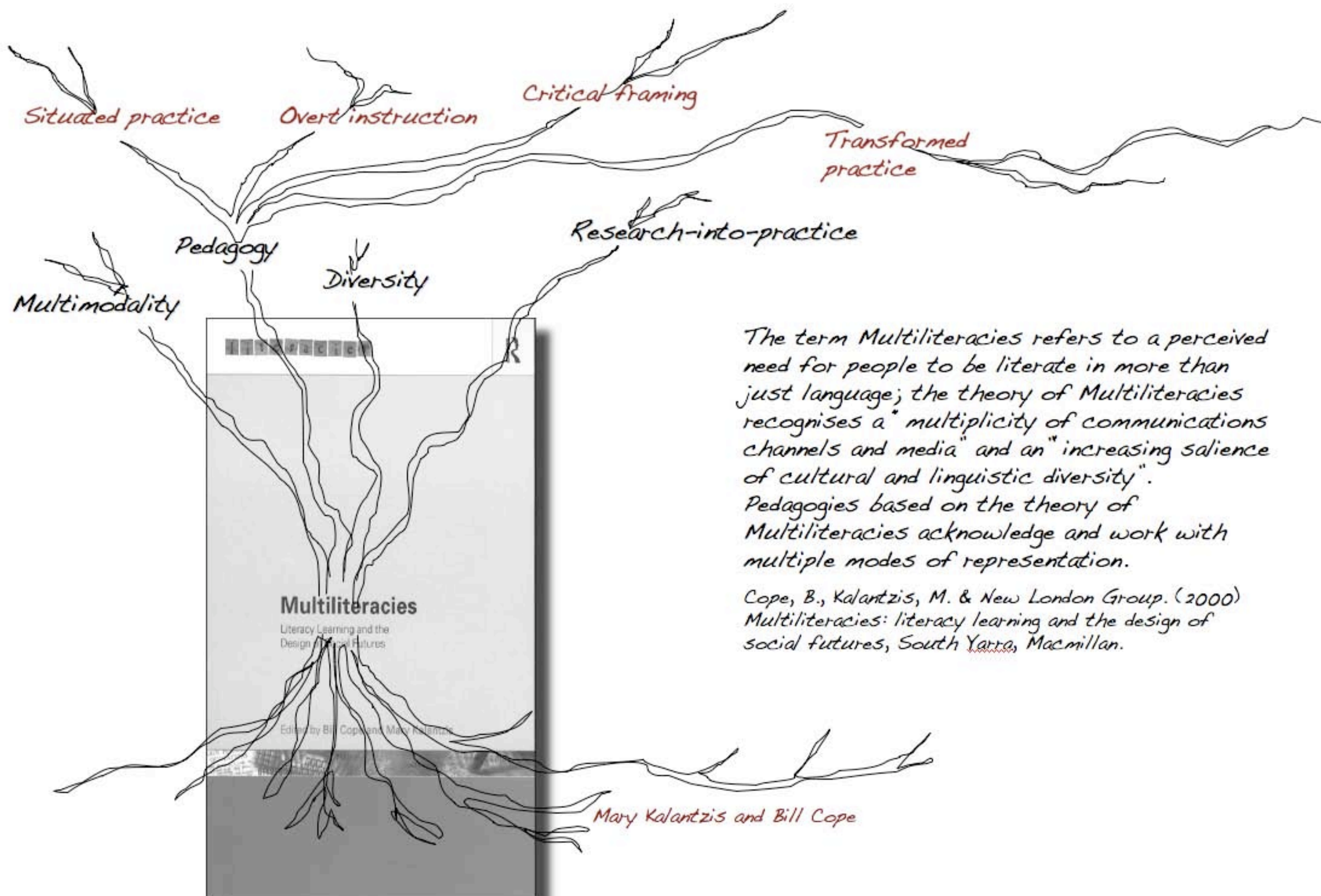
The theory and underlying pedagogies of Learning by Design have been brewing and developing for a very long time, taking shape and evolving in the writing and theorising of Kalantzis and Cope.

the evolution of Learning by Design



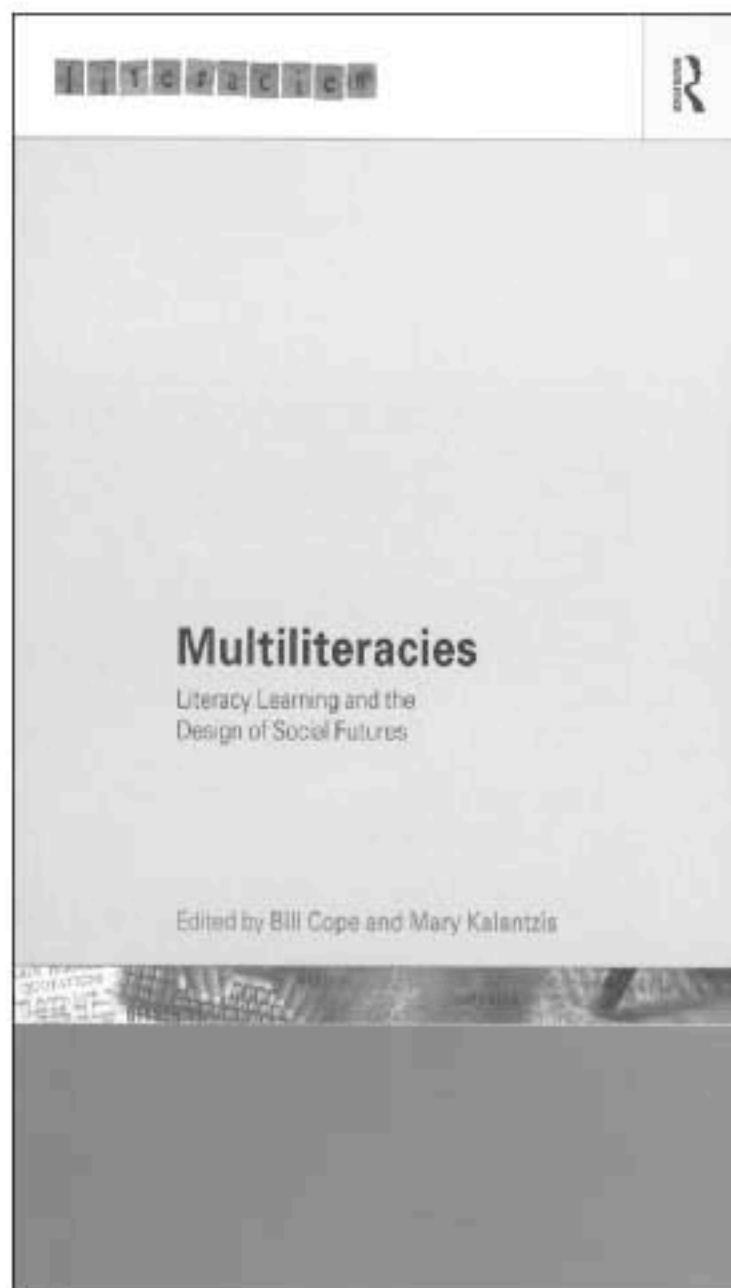
Learning by Design grew out of the Multiliteracies work and its emphasis on diversity, multimodality and pedagogy. The Multiliteracies pedagogies are the antecedents of the Knowledge Processes of Learning by Design.





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.

Cope, B., Kalantzis, M. & New London Group. (2000) *Multiliteracies: literacy learning and the design of social futures*, South Yarra, Macmillan.



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.

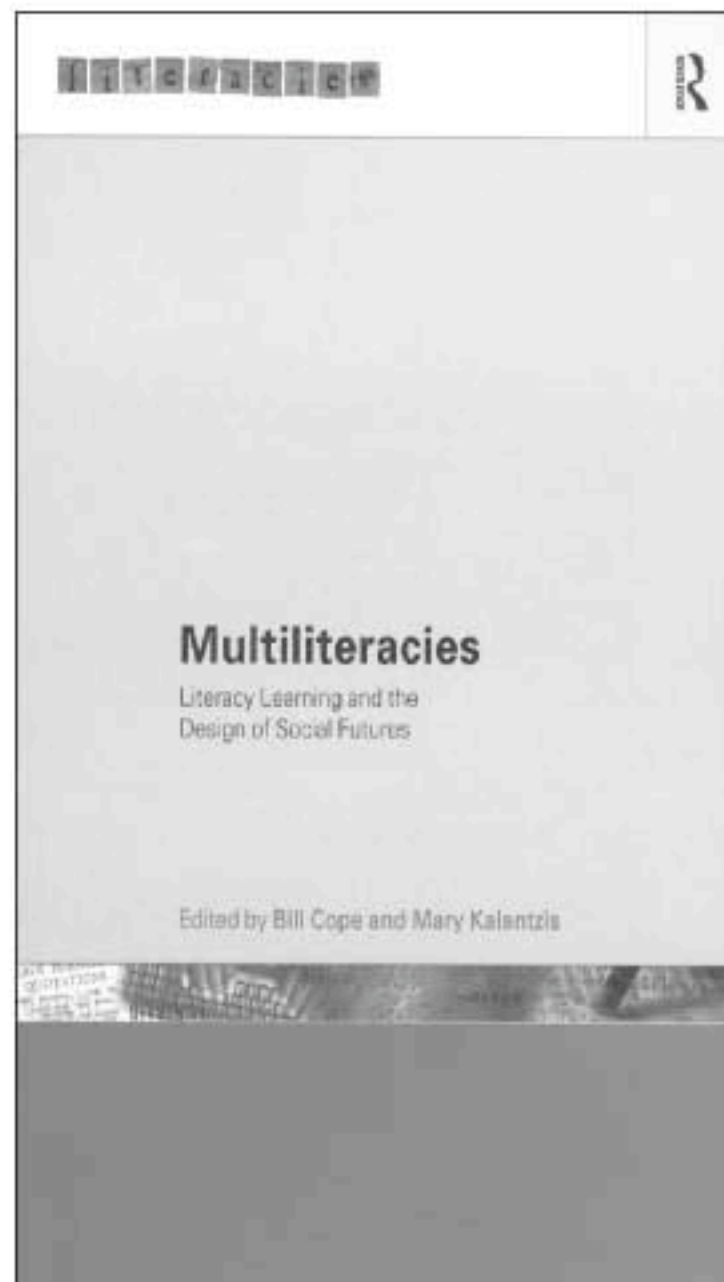
The Multiliteracies framework is concerned with multiple facets of learning: it was designed to address learner diversity and lifeworld differences; it accommodates and promotes a mix of progressive, traditional and critical pedagogies; it recognises and acknowledges multiple literacies; and it promotes 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.



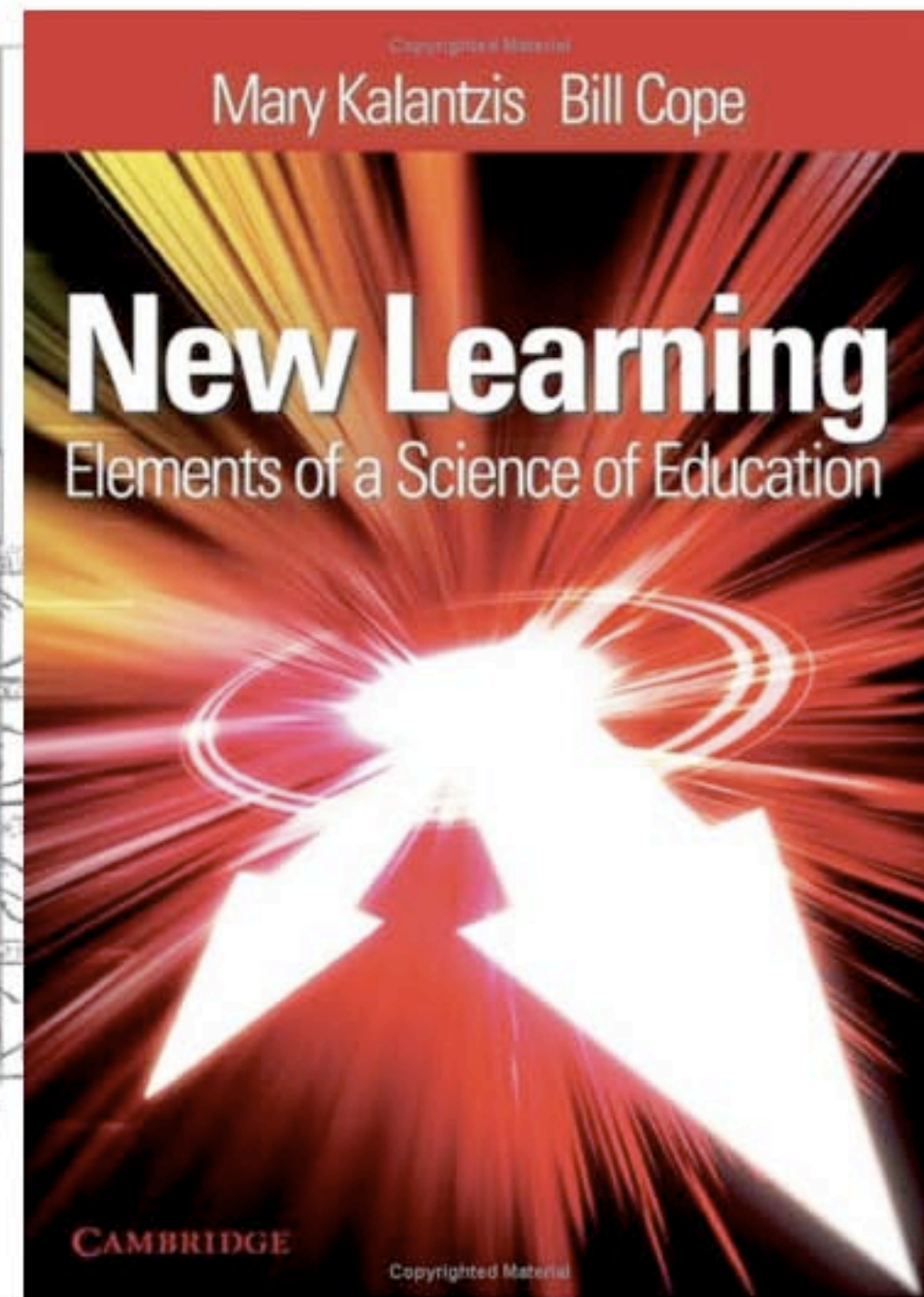


The Multiliteracies pedagogies (cont):

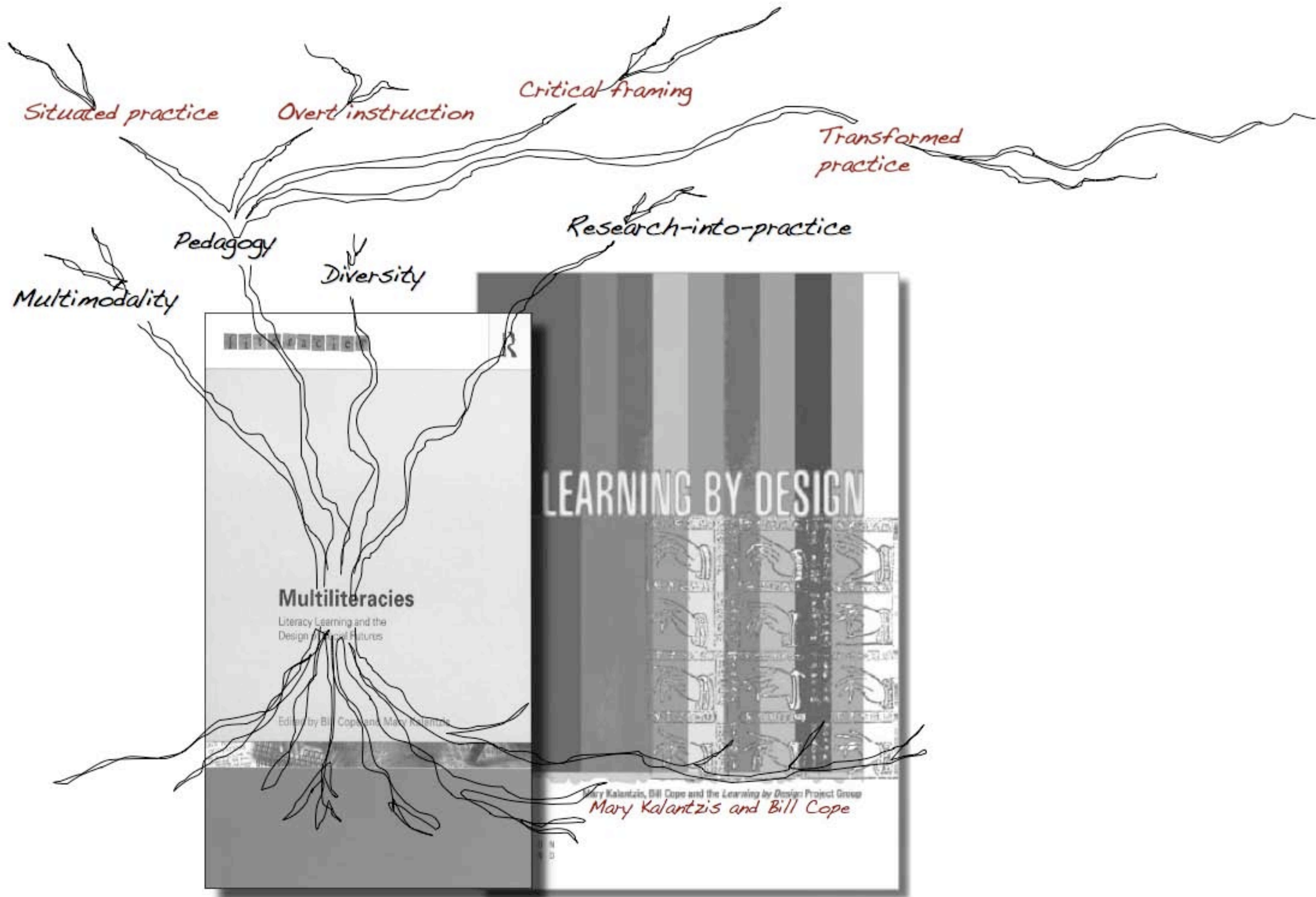
Critical framing: This pedagogy involves learners in questioning and analysing the significances, consequences and impacts of what they are learning - asking questions such as 'Who are the winners and losers here?' 'Who is affected by this and how?' This pedagogy involves learners engaging in dialogue, 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.

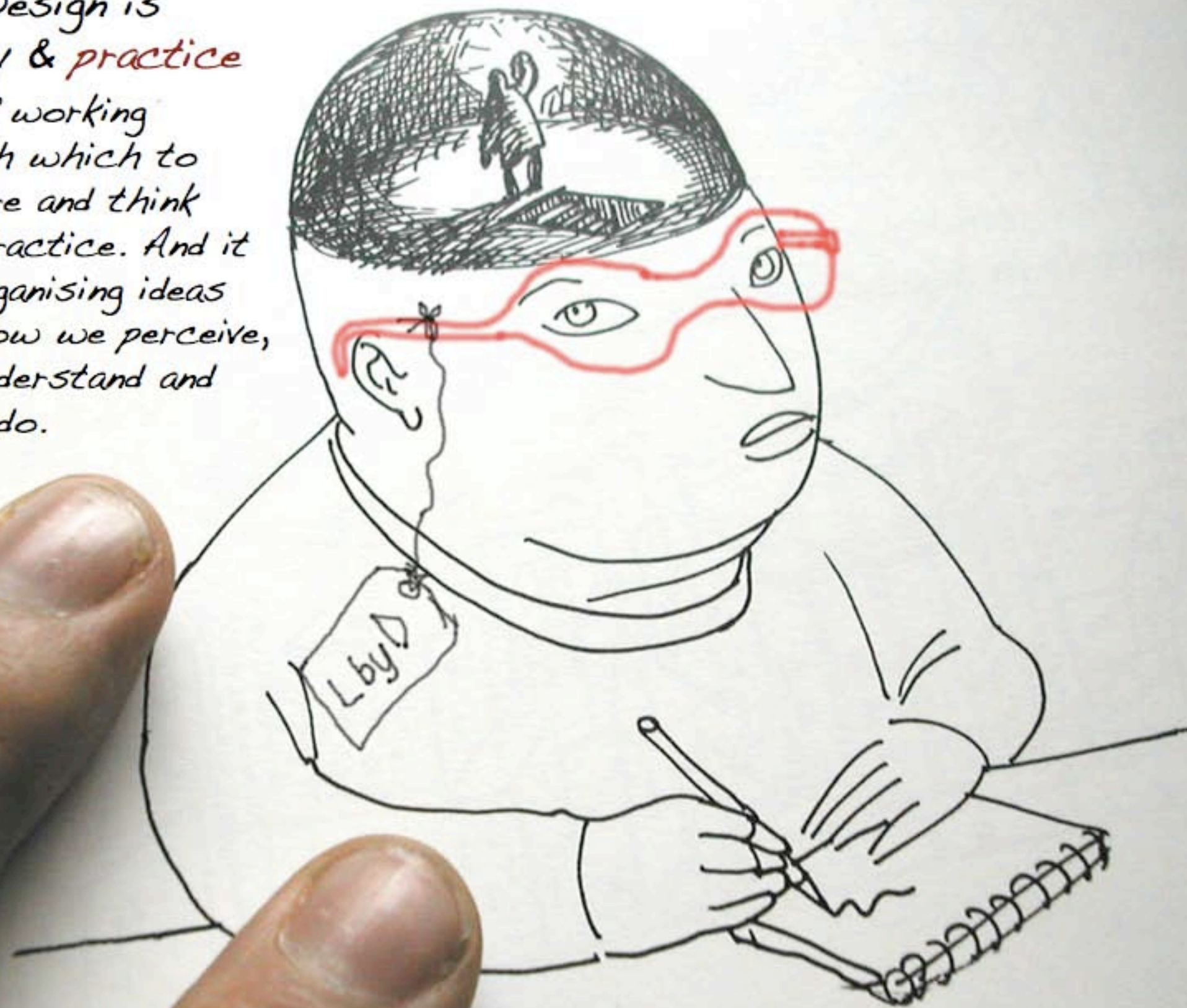
It also means being a learner, a designer and a researcher: documenting, reflecting on, and systematically exploring teaching and learning.

It provides a language for becoming such a being.



Learning by Design is
about theory & *practice*

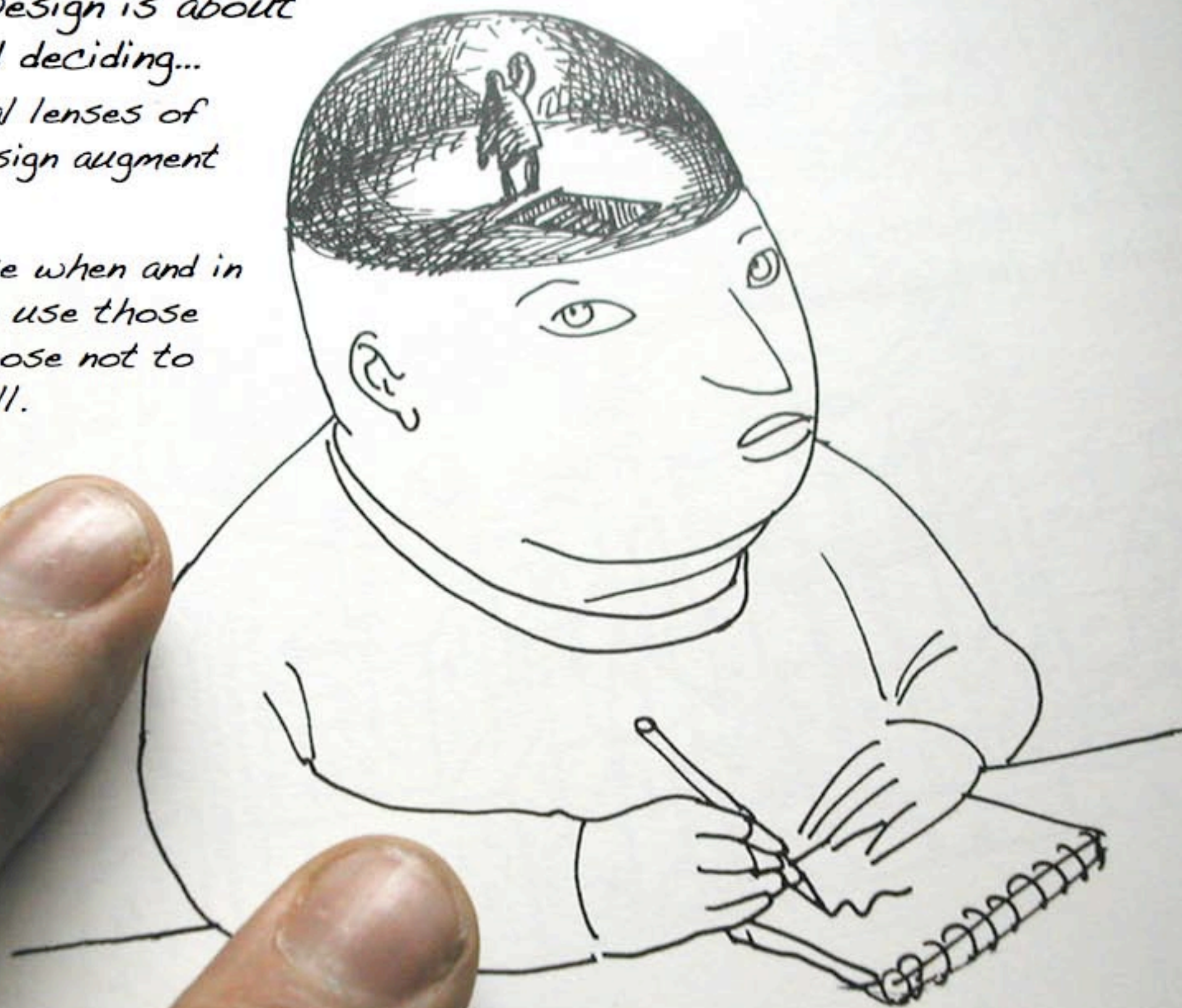
It is a set of working
lenses through which to
look at, explore and think
about one's practice. And it
is a set of organising ideas
that affect how we perceive,
talk about, understand and
plan what we do.



*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.*

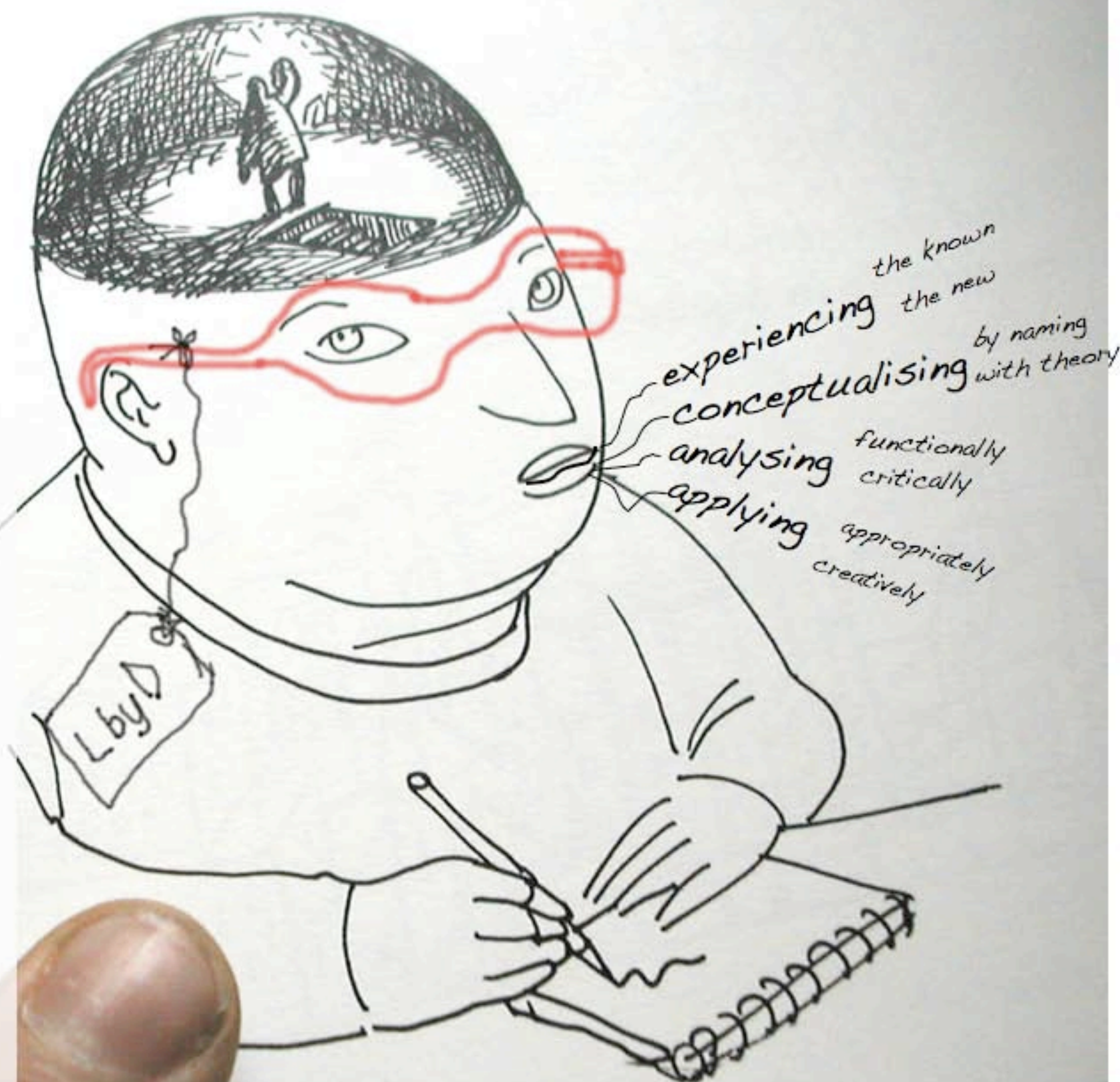


Learning by Design, a professional language...

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.

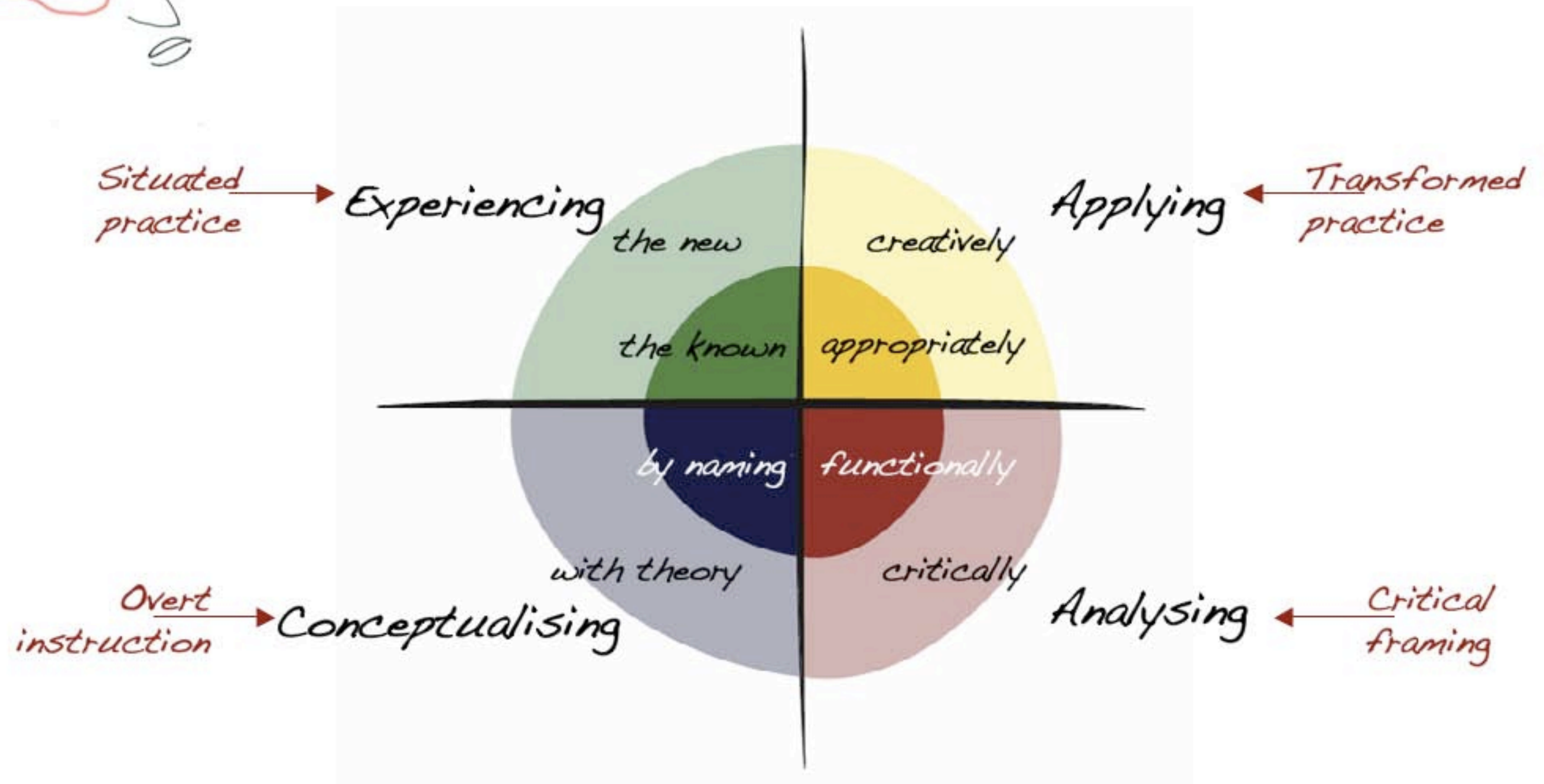
The naming of these pedagogies allows us to work with, discuss, analyse, plan and design teaching which is deliberate and purposeful, i.e. learning by design.

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.





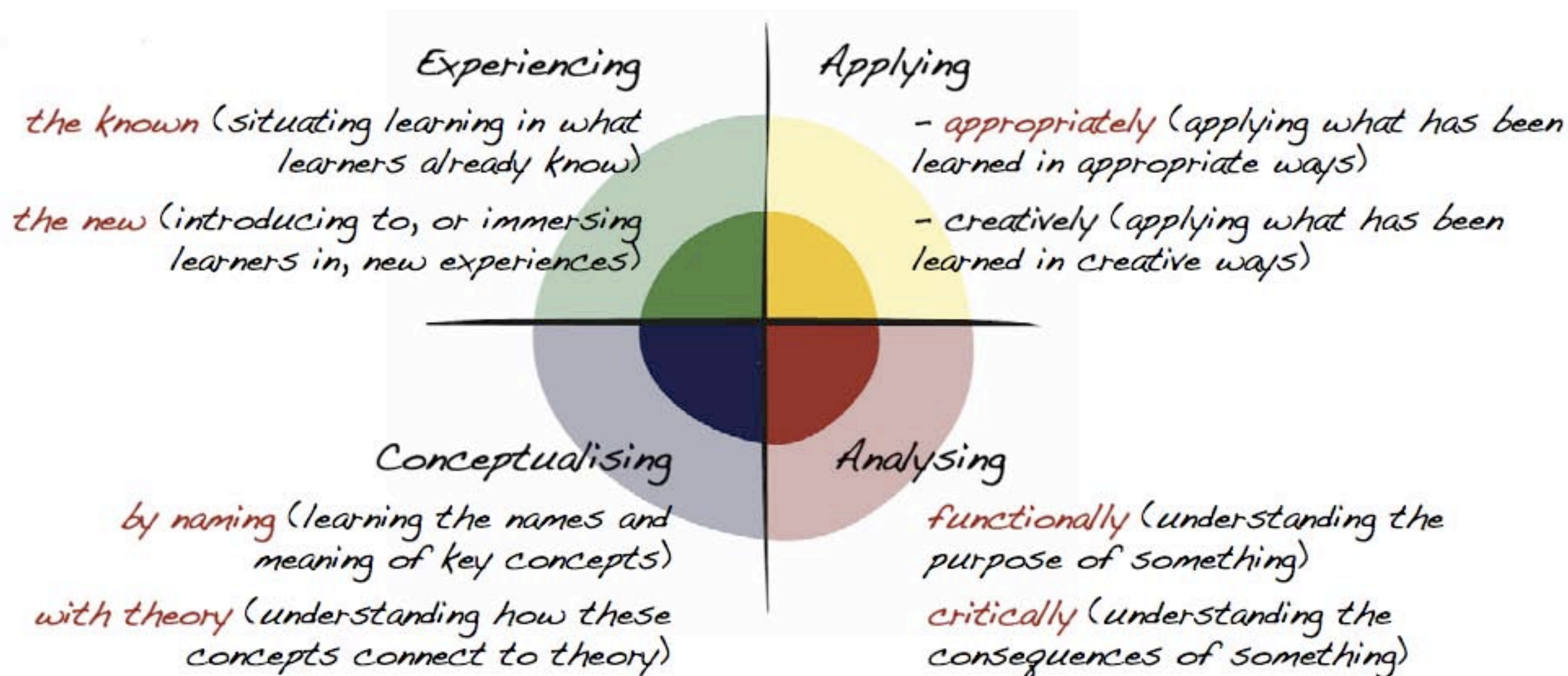
The Knowledge Processes



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

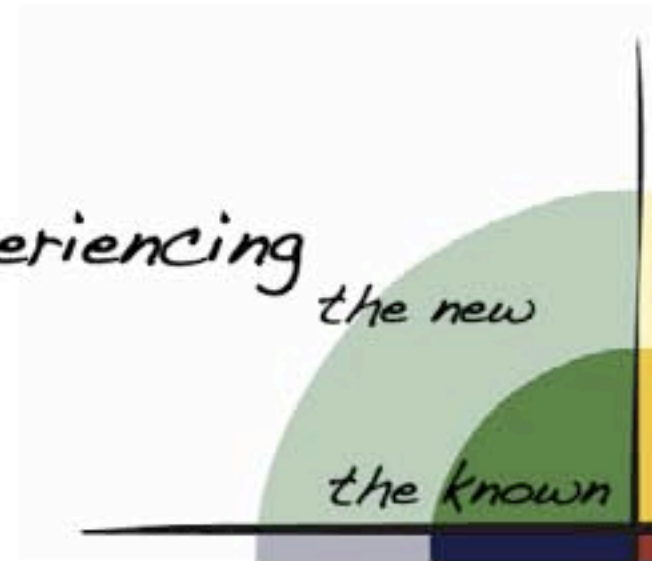


The evolution of the Multiliteracies pedagogies to the Knowledge Processes of Learning by Design represent a shift toward practice and a concern for being able to operationalise and enact the pedagogies.



The Knowledge Processes

Experiencing

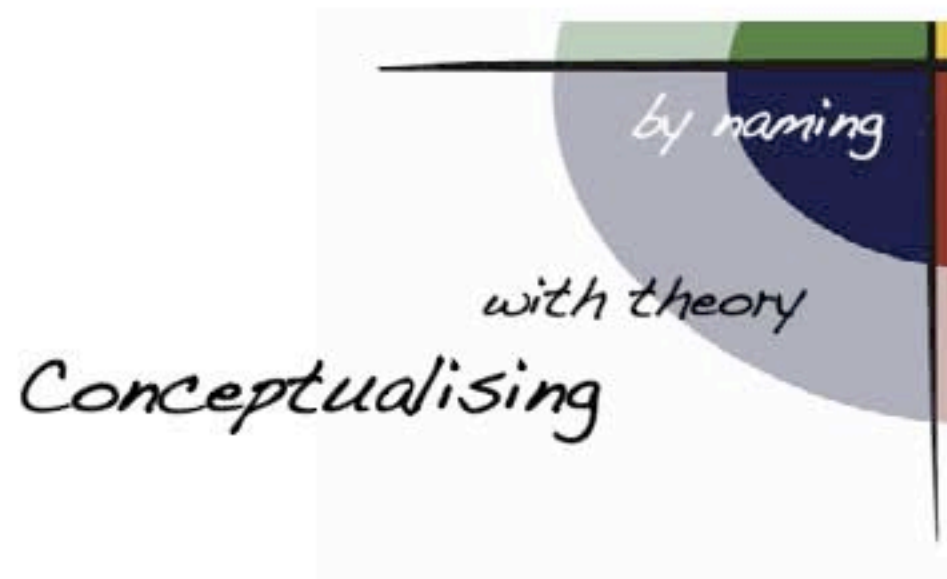


Experiencing the known/experiencing the new builds upon the tradition of experiential learning drawn either from students' varied lifeworlds or through new experiences that recognise their subjectivity. It is based on the recognition that learning is highly situated in a social and cultural sense and 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.



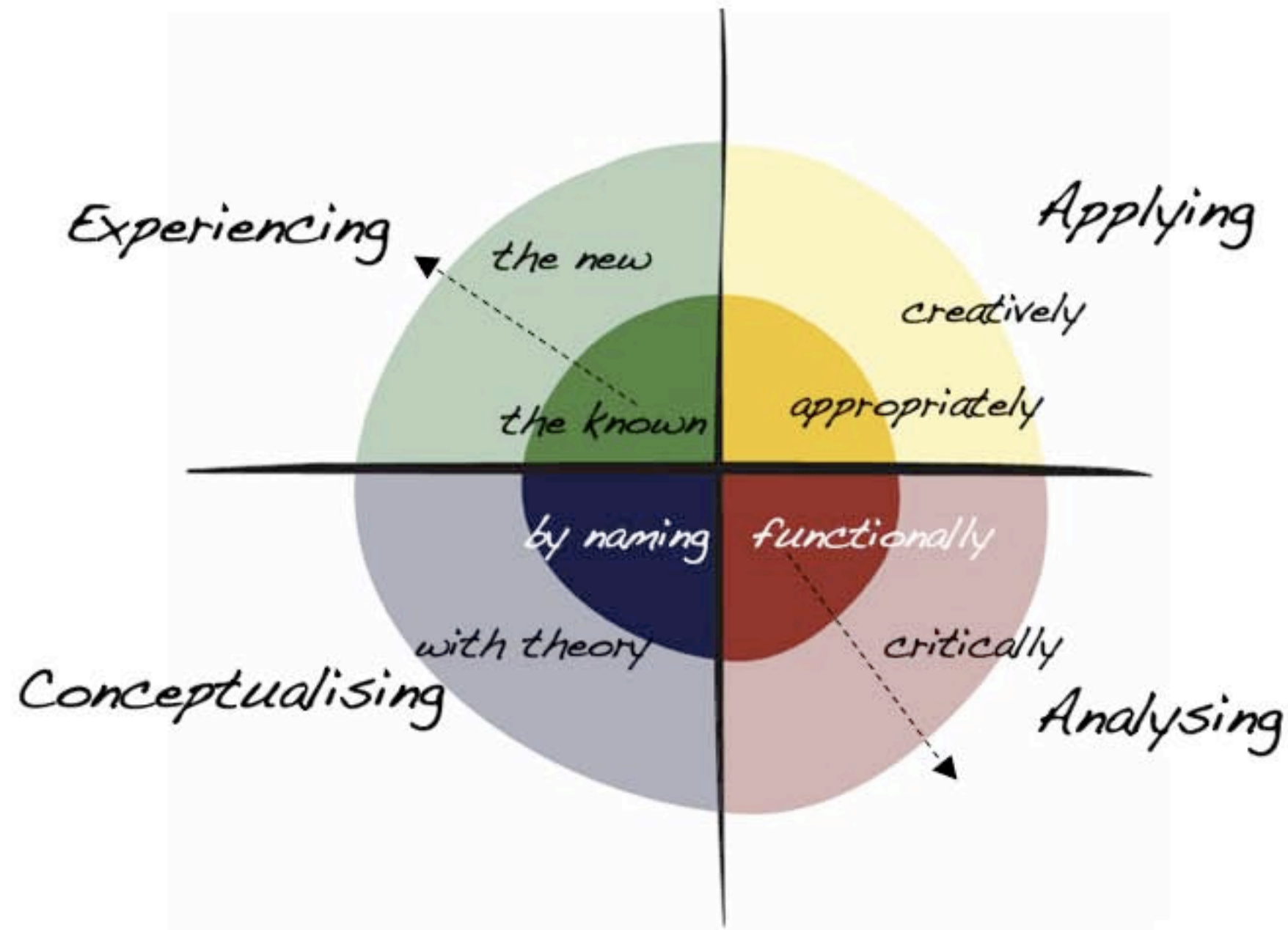


The Knowledge Processes



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".

Vygotsky, L. (1978). Interaction between Learning and Development, in Mind in Society., Cambridge, Harvard University Press

Crosswalk #1

The Knowledge Processes

Bloom's Taxonomy

Experiencing

the known

the new

Conceptualising

by naming

by theorising

Analysing

functionally

critically

Applying

appropriately

creatively

thoughtful deliberate design

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

Kolb's Learning Cycle

Concrete Experience

Reflective Observation

Abstract Conceptualisation

Active Experimentation

thoughtful deliberate design



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

Elaborate

Evaluate

thoughtful deliberate design



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.7e

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.



Sharing examples
of teacher work

Discussing examples
of student work

Designing & sharing
of designs

Dialogue & discussion

Sharing of responses to
journals & reflective prompts

=> Research-workshops



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.



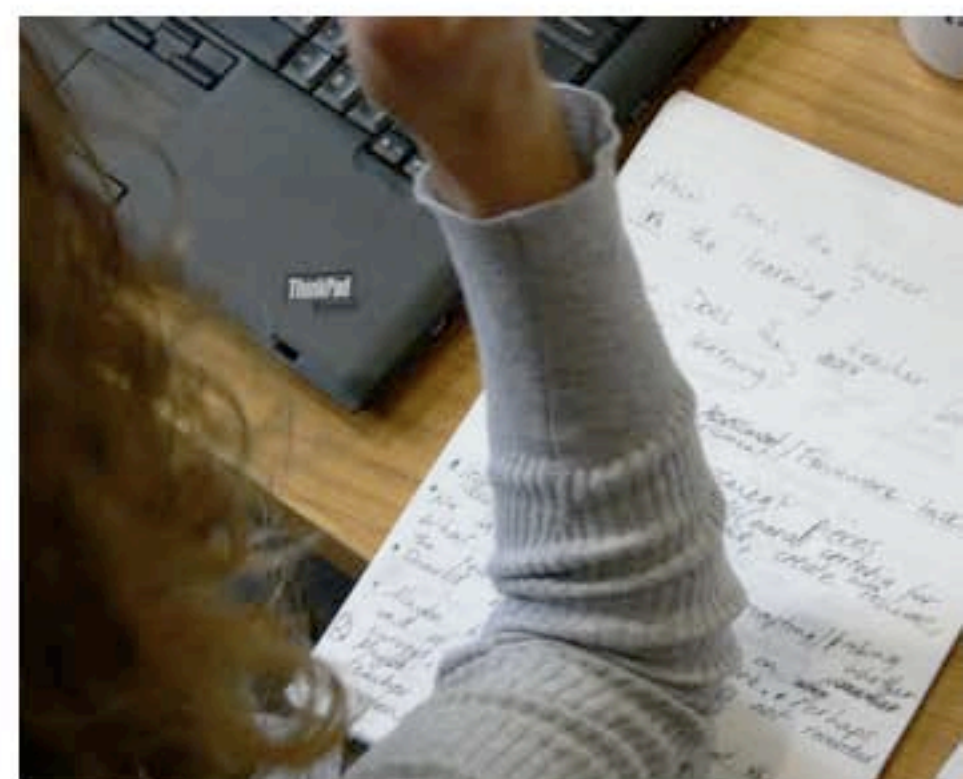
When I say this I am referring to the fact that when I plan using the framework and plan for the four quadrants I find that my lessons become more creative and engaging as I take the time to choose processes that will maximise the opportunity for student learning and utilise the skills they have.

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.

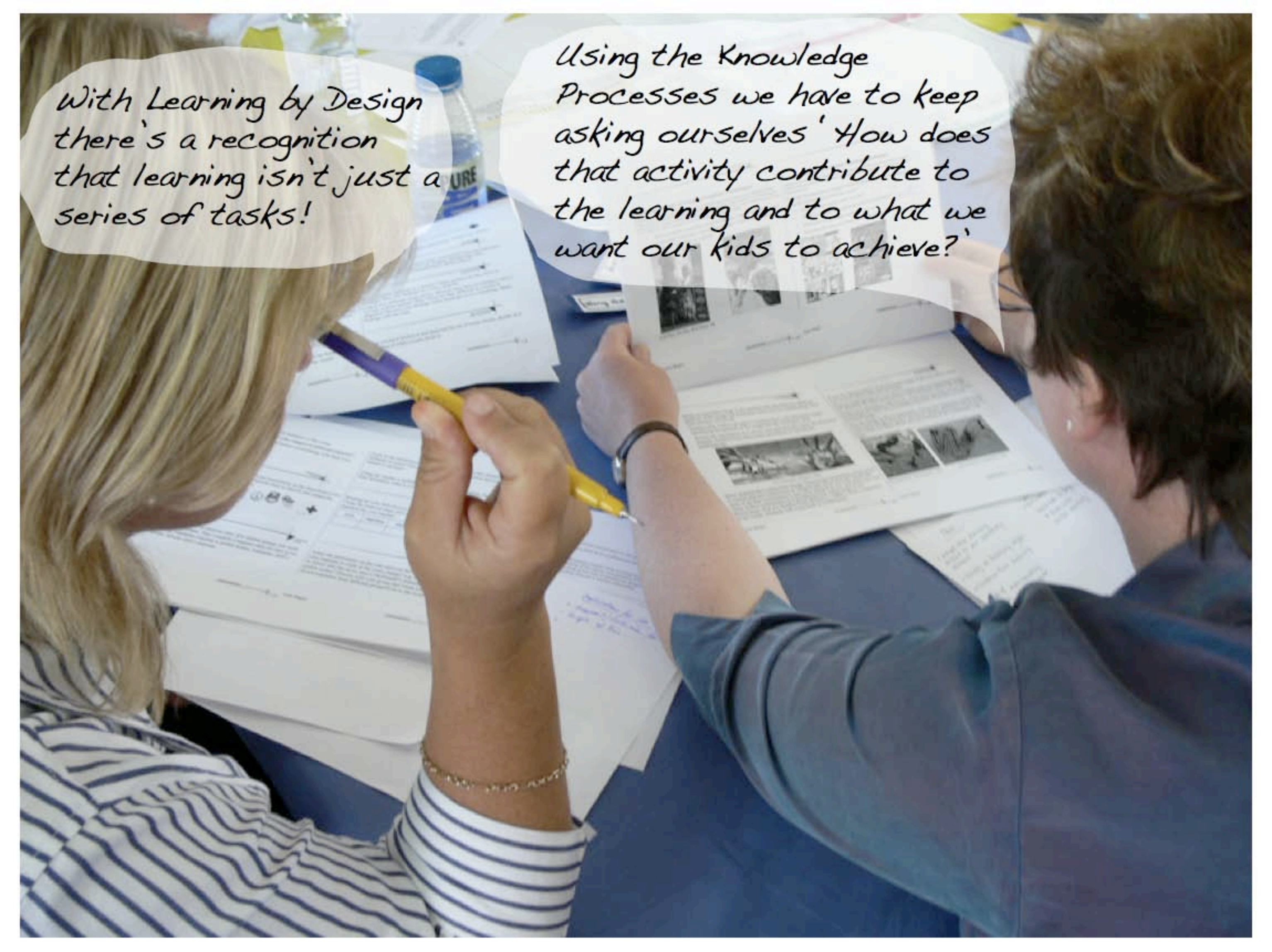
The **LbyD Placemat** offers an
environment in which it is
possible - working alone, or in
groups with post-it-notes -
to design units of work
which address the diverse
needs of learners while
employing a range of
pedagogies and modalities.





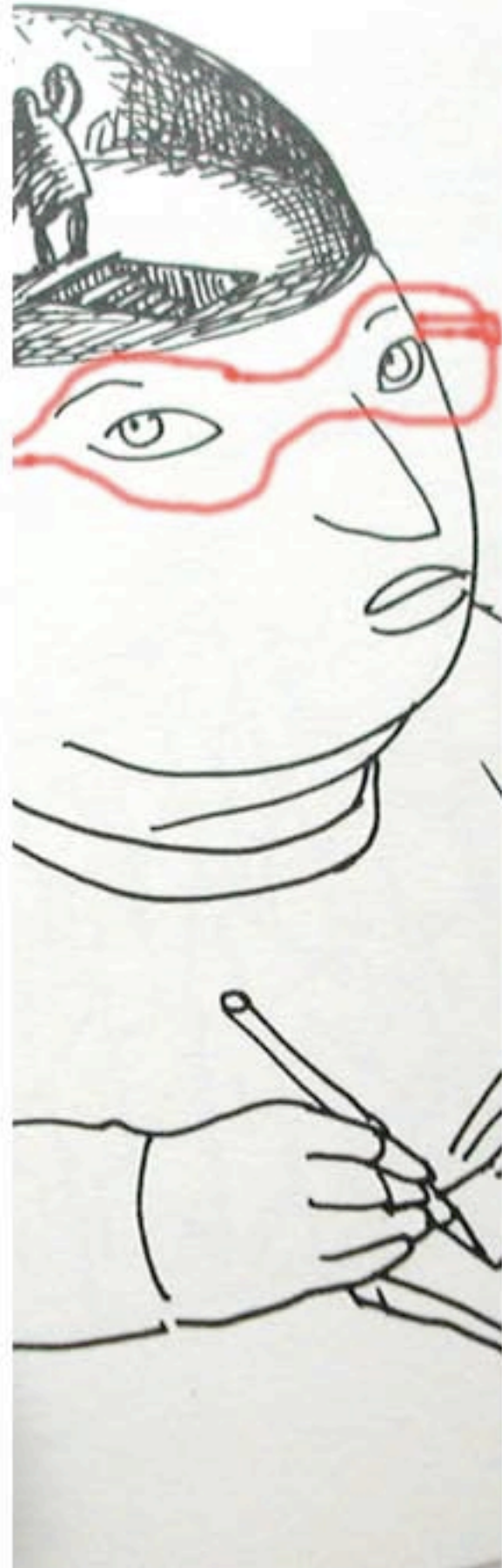
The Learning by Design Placemat can be used to stimulate thinking and reflecting and for scaffolding and mapping out initial designs.



A photograph showing two people from behind, sitting at a table and working on papers. The person on the left has blonde hair and is wearing a blue and white striped shirt. The person on the right has dark hair and is wearing a blue long-sleeved shirt. They are both looking down at papers on the table. There are several papers, some with text and some with images. A blue water bottle is visible on the table. Two speech bubbles are overlaid on the image, containing text about Learning by Design and Knowledge Processes.

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?'

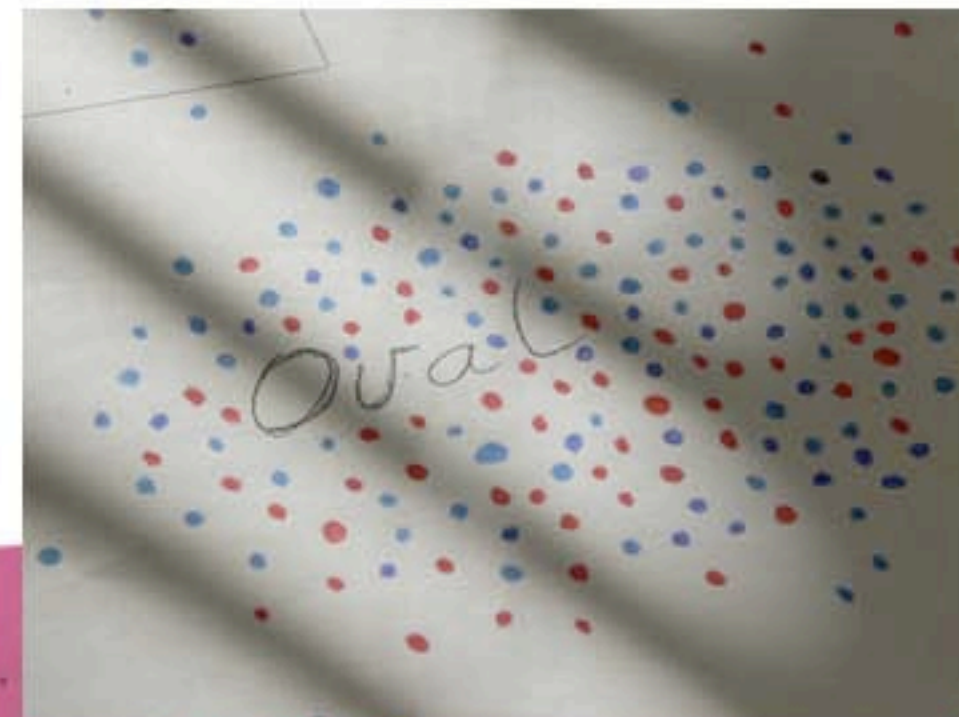
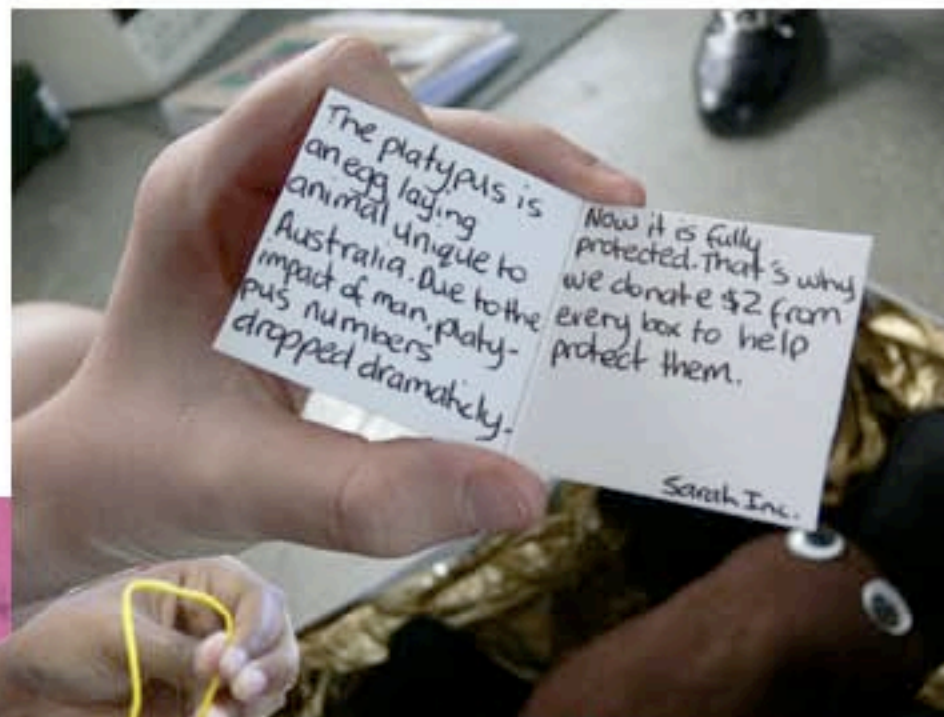


Learning by Design
is about creating,
capturing or collecting
artefacts for reflection,
analysis and sharing...

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.





editing using a demo movieclip.

Editing skills (New)
- set up of movie
- editing software
① Different features of
Movies ...
a) clip shelf
b) timeline tool
c) set goals for kids

Film export
into a DVD
for playing
onto DVD
could do
menus
covers.

work
calling etc

Evil

Student

Different

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.

Conceptualising (by naming)

Conceptualising

Who makes toys and how?

People Involved:

- * Inventor - created idea (invention)
- * Designer - sketches - prototypes (sample of pieces)
- * Toy Company
- * Sales Executives

Prototypes help us find out about:

- * What it looks like
- * The colours
- * Textures (materials)
- * How to play the game
- * Feedback
- * Manufacturer (reasonable price and quality)
- * Retailers (Toy shops)
- * Customers

black Jack

Monopoly
Twist
Uno
Naught
+
Crosses
PS-2

Conceptualising (different types of things)

modern toys

olden toys

How do toys move

Conceptualising

How do toys move

Toy or game

Toy or game	Force and Movement
Monopoly	BG
Chess	BG
Jacks	BG
Boogie	BG
COLO crazy	BG
Twister	BG
Soccer	BG
Kaleidoscope	BG
Mind	CG

by hand movement
hand movement
throwing
Shake
Jacks up
Put down
hand movement



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.



TEACHER RESOURCE

Reality TV
Morality and Ethics of Popular Television

Ed Cuthbertson and Rebecca Cusick

LEARNER RESOURCE

Reality TV
Popcorn for the Hungry

Ed Cuthbertson and Rebecca Cusick

based on the information presented in Zoo.

in this way? Record all the positive and negative messages/ideas about

visuals do?

	Animals	Humans
Offes		
nd right sides page spread		

affect us?

nk about the animals in Zoo?

nk about the humans in Zoo?

or sad? Why? Why not?

hor made these choices to present the people and animals

TEACHER RESOURCE

LEARNER RESOURCE

This is how it feels to have one of your designs published!



=> the Learning by Design pedagogical framework.

TEACHER RESO

Morality

Ec

teacher resource

*analysing
functionality*

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 sombre 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 gorilla 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.

*analysing
creativity*

student resource

*by thinking
about one
something else*

What do the visuals do?

	Animals	Humans
Colour		
Framing		
Demands and Offers		
Line		
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

*by thinking
about
who something
is for*

TEACHER RESOURCE

• 11

STUDENT RESOURCE

• 11

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
the new



by naming
conceptualising
with theory



functionally
analysing
critically



appropriately
applying
creatively

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*