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Discipline-based reflective metaphors for teaching and learning: a framework for academic development in tertiary education.

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Aim

This paper introduces the model of a discipline-based personalised reflective metaphor as a comprehensive framework for academic developers to work collaboratively with tertiary teachers, to facilitate a process for developing a teaching philosophy and reflecting on all aspects of teaching practice including course design, teaching strategies, modes of delivery and assessment.

The issue

Most faculty staff are not formally trained teachers. They have honed their teaching practice over many years through an unstructured process of what can be loosely called action research.

Consequently they often lack the epistemological and ontological tools to articulate and position their teaching practice and philosophy in the context of a theoretical pedagogical framework.

Reflection is often unstructured and sketchy.

The solution

Academic Developers collaboratively work with teachers to co-construct metaphors to facilitate development of a teaching philosophy and reflection on all aspects of their teaching.

http://www.coconstruct.com.au/.

What is a metaphor?

Kövecses (2002) defines a conceptual metaphor as consisting of "of two conceptual domains, in which one domain is understood in terms of another."

The source domain from which the metaphorical expression is drawn.

The target domain, the concept, process, theory or model that needs to be understood.

Metaphors are useful for teaching concepts

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Many tertiary teachers use metaphors and analogies to make new and unfamiliar concepts more meaningful to students by connecting what they already know to what they are learning.

Atomic structure metaphor

What is a good source of metaphors for teaching and learning?

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The activation of prior knowledge to help students learn new knowledge is considered a basic principle of good teaching (Glynn, 1996) and is the foundation for the effective use of metaphors.

Prior knowledge is strongest in the specialism or discipline of the teacher.

Therefore…….

Use discipline-based concept, model or process with which the tertiary teacher is thoroughly familiar to develop a metaphor for the teaching and learning process.

Discipline based metaphors

A discipline-based metaphor illustrates the teaching and learning process with reference to a concept, model, theory or process rooted in the disciplinary expertise of the teacher and can incorporate all aspects of the teaching, learning, assessment and feedback cycle.

The Research Method

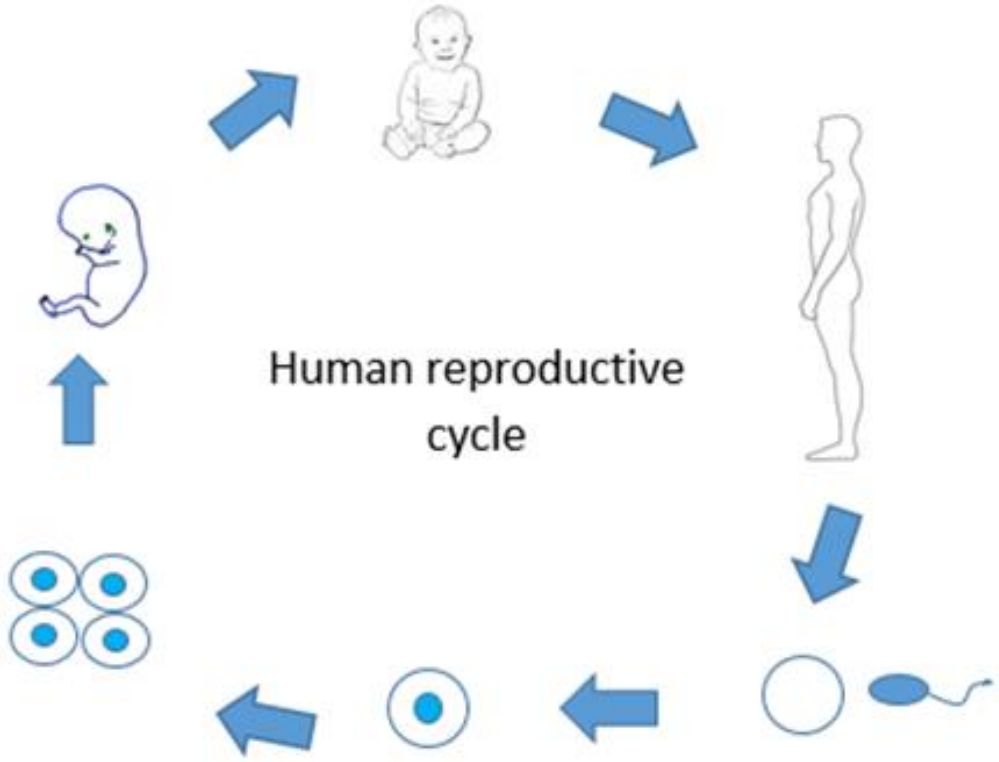
- Action research
- Grounded theory approach consisting of iterative cycles of systematic reflections to inductively generate a generalised best practice model
- Benefits both the academic developer and the teacher

Sampling

- A purposive non probabilistic sampling approach was used to select three key discipline-based reflective metaphors from a pool of metaphors developed collaboratively over a number of years.
- The selection was based on the retrospective identification of critical incidents which helped shape the generalised model and professional practice.

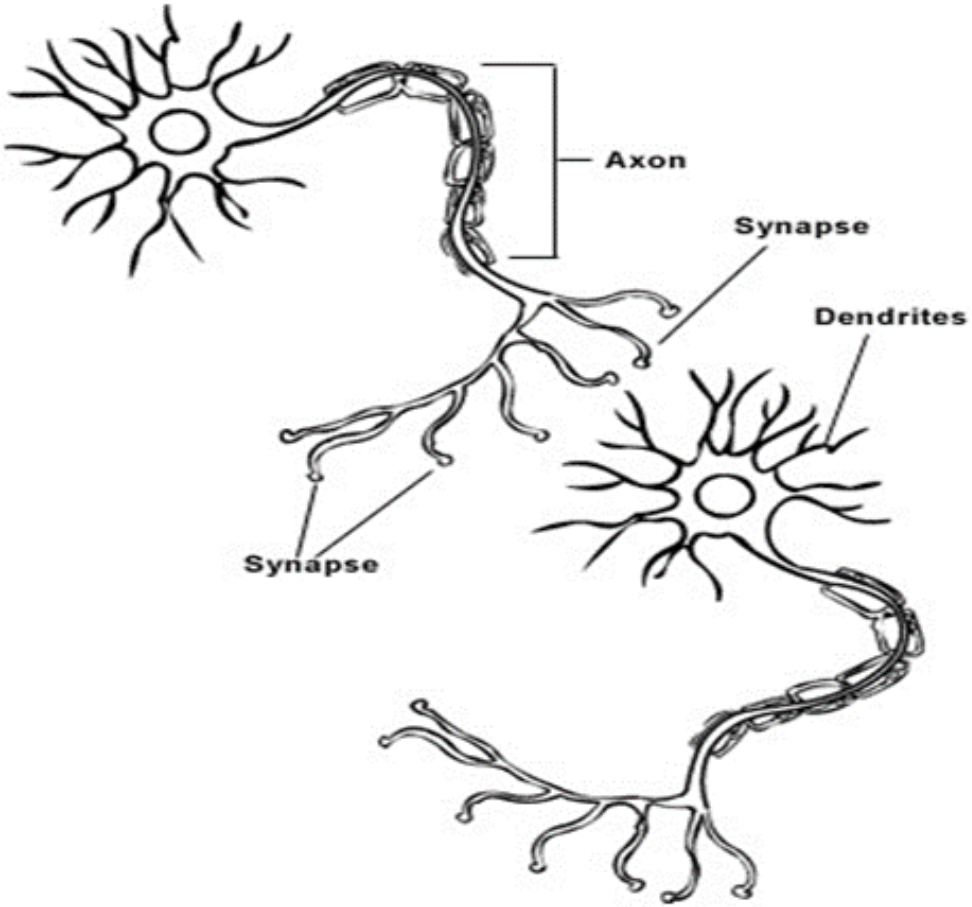
Examples of metaphors.

Example 1: Human reproduction metaphor



Source domain	Target domain
Egg	Student
Sperm	New concept
fertilization	Understanding of concept
DNA	Lesson plan
Stem cells	Generic transferrable skills
Mitosis	Revision
Embryo stage	Specialisation
Womb	Learning environment
Umbilical cord	Interaction between teacher and student
Birth	Graduation
Growth	Lifelong learning

Example 2: Nerve system metaphor



Source domain	Target domain
Dendrites	Learning pathways
Adjacent neurons	Students and teachers
Nerve impulse	Knowledge transfer
Neurotransmitters	Learning experiences
Synapse	Barriers to learning
Axon	Teaching medium eg f2f on line
Threshold voltage	Threshold concept
Resulting action	Assessment
Neurological disease	Learning disability
Speed of transmission	intelligence

Adding another layer

Use the framework of the metaphor and Brookfield's lenses to facilitate a process of critical reflection on all aspects of the teacher's personal approach to teaching and learning.

Reflection

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Autobiographical lens

- What teaching strategies and approaches do you use? Why
- What assessment strategies do you use? Why??

Student lens

- What kind of summative and formative evaluation do you use?
- What aspects of your teaching do students like?
- What do students say about the teaching strategies and assessment methods you use?

Colleague lens

- Has your teaching been observed by one of your colleagues? What was their feedback?
- Do you have a mentor? How does this support your teaching?

Literature lens

- What have you learnt from the literature on teaching and learning and teaching conferences you have attended? How has this changed your practice?

Why use this approach?

This is a comprehensive approach to guide and reflect on all aspects of teaching practice using Brookfield's lenses as a mechanism for the systematic reflection on all aspects of the teaching and learning process including use of student evaluation, peer observation, pedagogical discussions with colleagues and engagement with academic developers and the literature.

Conclusion

The model of the individualised discipline-based reflective metaphor is a powerful framework for:

- developing teaching philosophies
- reflecting on all aspects of the teaching and learning process
- Facilitating the improvement of the professional practice of the Academic Developer and the tertiary teacher.

Parting thought

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