

Drinking Deeply from the Poisoned Chalice

(or...What to do when you have
to teach terrified students
something they hate?)

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Background

- Psychology is a very popular area of study for Victorian students, both at secondary school and university. Why?
 - “Soft” science option
 - Girls do it (66%)
 - Inherently interesting to young people
 - 15,000 students do it in VCE
 - Strong influence on choice of university course

The Challenge to Students

- Psychology has always had more than its fair share of quantitative research methods and data analysis. Why?
 - Must prove itself a science
 - Evidence-based practice
 - Empirically-validated interventions
 - The Scientist-Practitioner model
- Students hate stats!
- Students fear stats!
- Students are anxious about stats!
- Student have to learn stats!

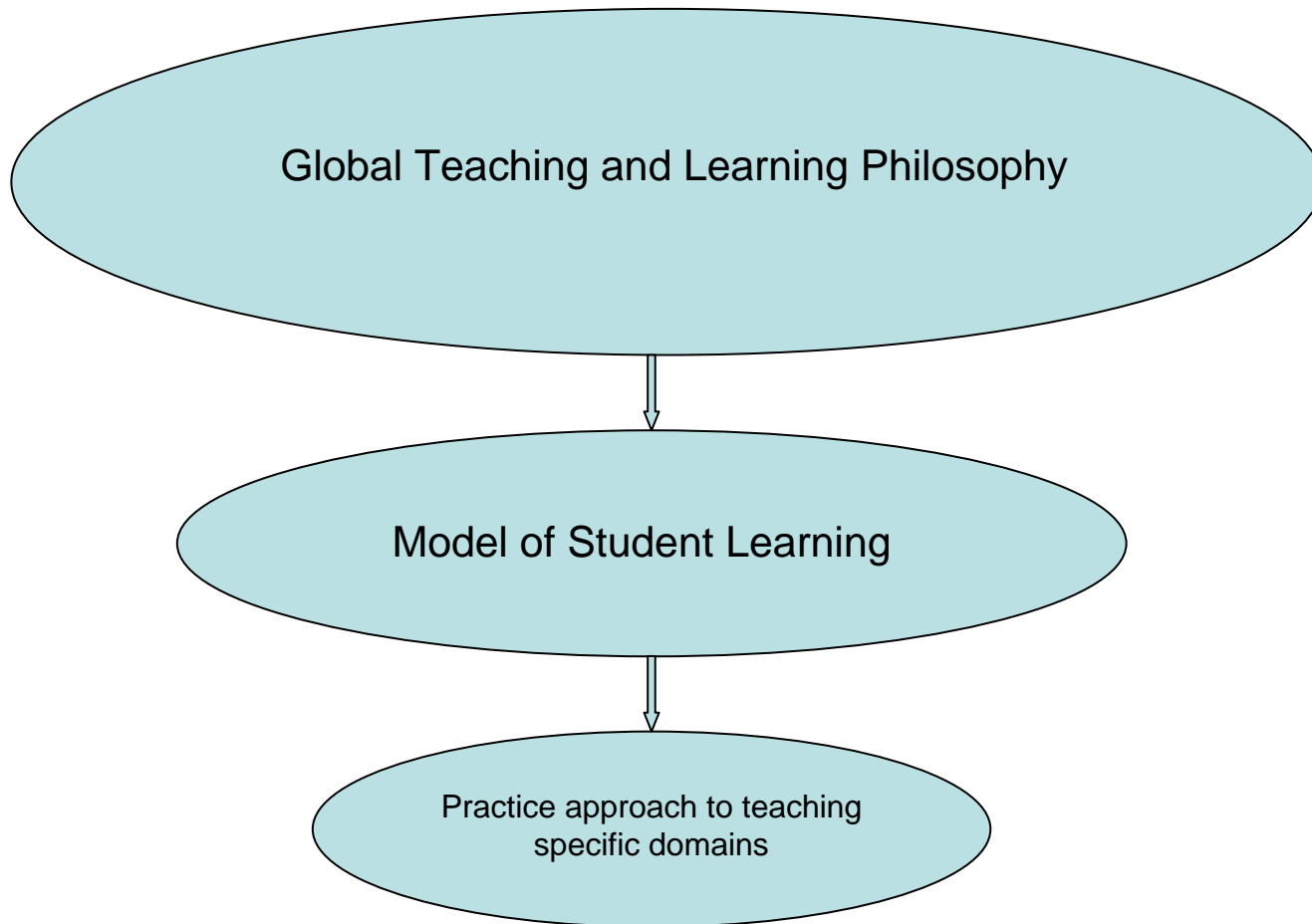
The Challenge to Educators

- Foster deep-level learning of research methods and data analysis.
- Inspire and motivate students to recognise the relevance and importance of research methods and data analysis in their understanding of psychology both as a science and a practice.
- Break down the traditional fears and anxieties that students have toward this area.

How?!?

1. A theory-driven approach to teaching the difficult and confronting areas of research methods
2. Putting that theory into practice.
 - Attempt to motivate and inspire students, break down fears and anxieties, and foster deep learning by combining a theory-driven approach with skilled communication, interpersonal and presentation techniques.

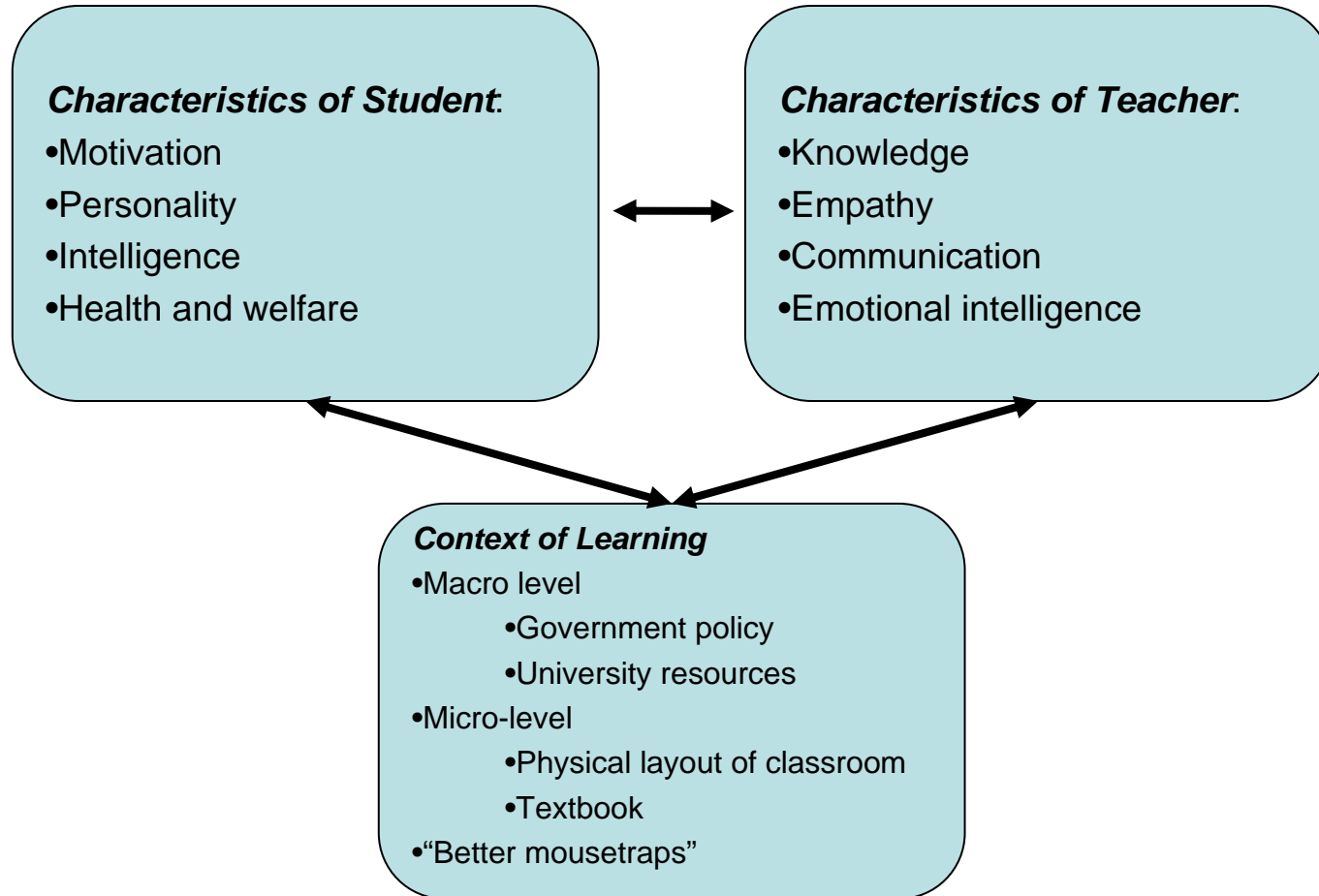
A Three-Level Model



Teaching and Learning Philosophy

- 12 guiding principles that guide my practice as a university teacher
- Sits at the top of the model and guides everything beneath it.
 1. Recognise, appreciate and foster knowledge and understanding of “deep” learning.
 2. Make learning enjoyable without being trivial or flippant.
 3. Enthusiasm and passion on the part of an educator positively influences student learning.
 4. Educational approaches should be evidence-based and reflective.
 5. Teach because you have a genuine love of helping students to learn.
 6. Actively involve adult students in the learning process; empower their learning.
 7. Win the “battle of hearts and minds” when teaching challenging material
 8. Foster an appreciation of the real-world relevance of learning.
 9. Be reflective and self-critical of your own practice; always strive for improvement.
 10. Have respect for students, regardless of how challenging they may be. Listen and learn from students. Seek and value their input
 11. Incorporate educational technologies that will effectively enhance learning.
 12. Self-knowledge: know what you’re teaching and why you’re teaching it!

Model of Student Learning



Implementation and Practice

- Domain Specific—Quantitative Research Methods and Data Analysis
- Based on four goals:
 1. ***Address fears and uncertainties. Empathise. Reduce anxiety.***
 - Examples of practice techniques
 - Humour and anecdotes
 - Reassurance, unconditional positive regard (“great comment”; “glad you asked that question”)
 - Open door policy
 - Learning objects, context for learning
 - Relating well to students as people
 - Empathise, speak from own experience
 - Be self-deprecating

Implementation and Practice

- ***Goal 2: Emphasise importance and relevance of material***
 - Examples of practice techniques
 - Real-world examples from popular media
 - Examples from popular culture that students can relate to: YouTube videos, current films, TV shows, music.
 - Hierarchical approach based on nine steps
 1. Area of interest
 2. Derive answerable question
 3. Consider reasons for posing question
 4. Establish research design and method for addressing
 5. Consider statistical question/hypothesis
 6. Choose appropriate test
 7. Demonstrate test
 8. Reflect on result, consider alternatives
 9. Consider theoretical and applied implications

Implementation and Practice

- ***Goal 3: Deliver core content in a relevant, comprehensible and engaging manner***
- Examples of practice technique:
 1. Take problem-focussed approach
 2. Emphasise that stats is a series of tools to do a job; the “job” is answering research questions
 3. Provide technical support to enhance learning
 - Digital recording
 - DLS resources
 - Lectopia
 4. Communication and inter-personal skills
 5. Maintain enthusiasm, interest and commitment.

Implementation and Practice

- ***Goal 4: Assess learning outcomes***
 - Examples of practice technique
 1. Student evaluations
 2. Measures of anxiety and attitude
 3. Focus groups
 4. Provide varied assessment
 5. Improve assessments through analysis and quality cycle
 6. Balance theory and application in assessment.

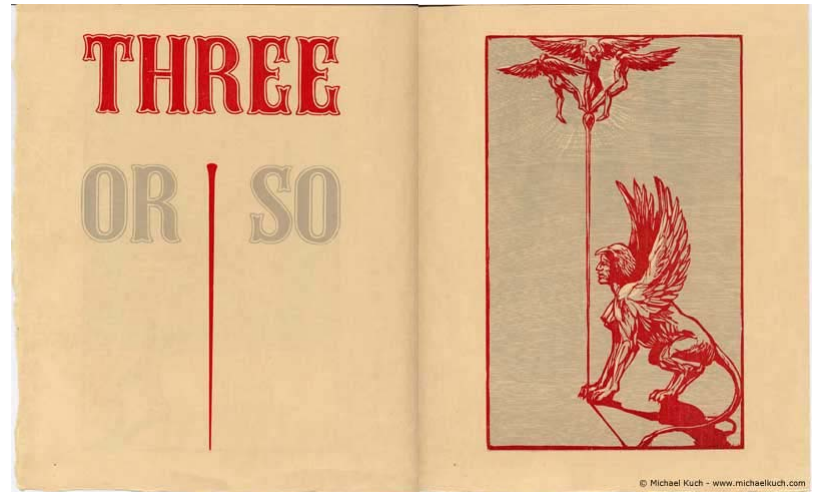
Part II

Do Better Mousetraps Make Better Teachers?

Formula for success in academia:



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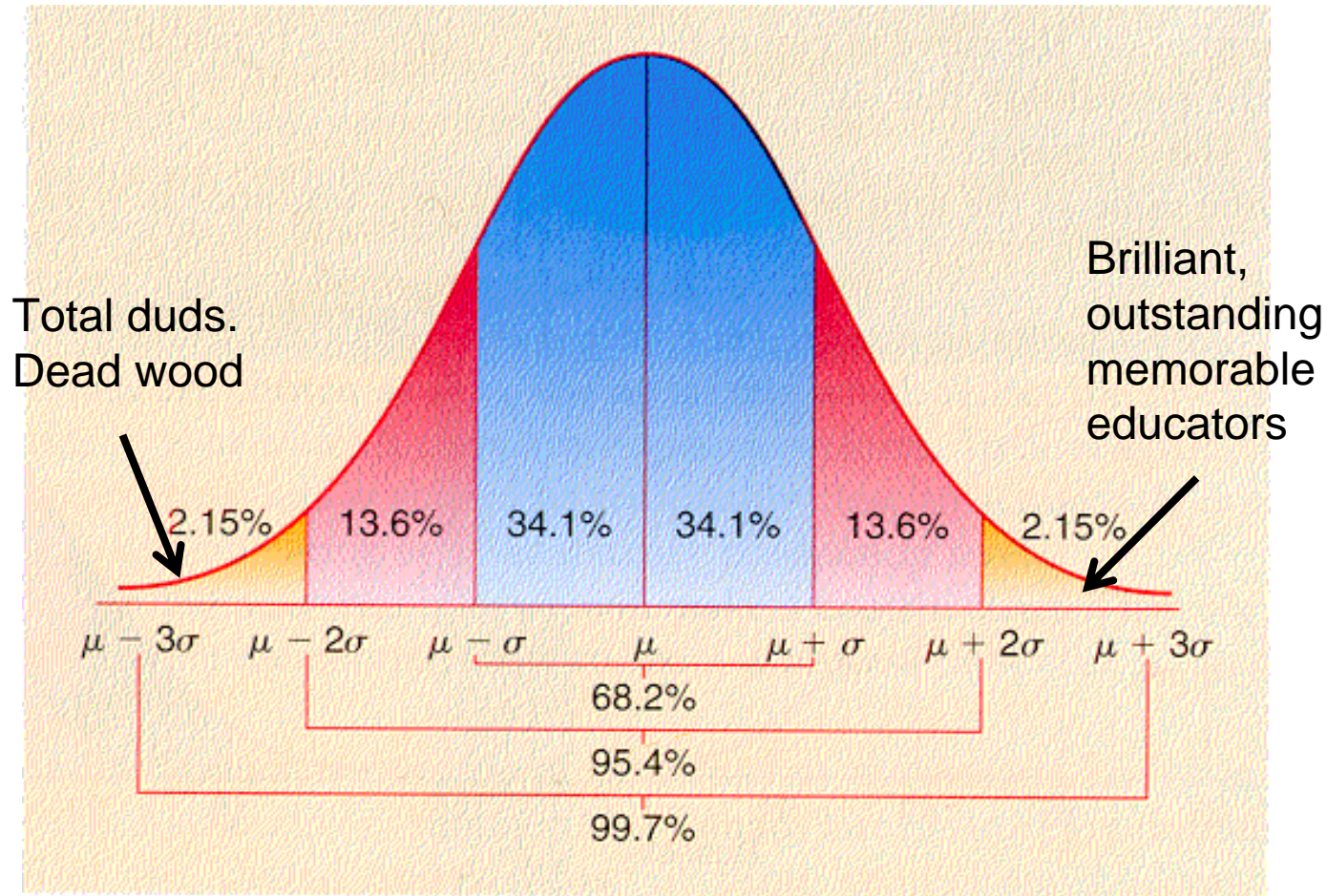
Modern Academia

- Rewards:
 - Specialisation
 - Counting the number of angels dancing on the head of the pin
 - Mastering *The Glass Bead Game*
 - Invention
 - Building better mousetraps
 - Get your name associated with a “thing”; or, even better, have the “thing” named after you.
- Rewards in the form of:
 - Grant money
 - Promotion
 - Publication
 - Fame and fortune

Is this the Best Scenario for Developing Better Learning Outcomes?

- A bottom-up approach
 - A million monkeys with a million typewriters will eventually produce the works of Shakespeare.
 - Eventually we hit paydirt. Type 1 error?
- Problem of external validity
 - The ability to be able to generalise results across times, settings, and populations
 - People building their mouse traps are sincere and committed. What about the useless, dead wood academic who couldn't give a stuff?

The Effect of Better Mousetraps on Educators



Better Mousetraps...

- Waste of time with dud teachers?
 - Firing a pea-shooter against a tank
 - Not interested
 - Don't care
- Waste of time with outstanding teachers?
 - Not so cut and dried
 - Ceiling effect?

A Top-Down, Structured, Strategic Approach

- Ask the “Big Picture” questions first
 1. What are the characteristics of a memorable, outstanding, elite educator?
 - What aspects of the outstanding educator are “born”; what aspects are “made”?
 2. What *is* a memorable, outstanding, elite educator?
 3. What aspects of (1) and (2) are intervenable?
 - How to intervene
 - How to make the intervention most effective to those who most need it.
 4. Why are lousy educators lousy?
 - Quantitative or qualitative distinction with elite educators.

Where Do Better Mousetraps Fit Into This?

- One piece of a very large puzzle
- Need to be developed strategically in the context of a broader model of developing the best learning experience possible
- Need to recognise individual differences in educators when considering application
 - One size does not fit all.