


CURRICULUM, PEDAGOGY AND BEYOND



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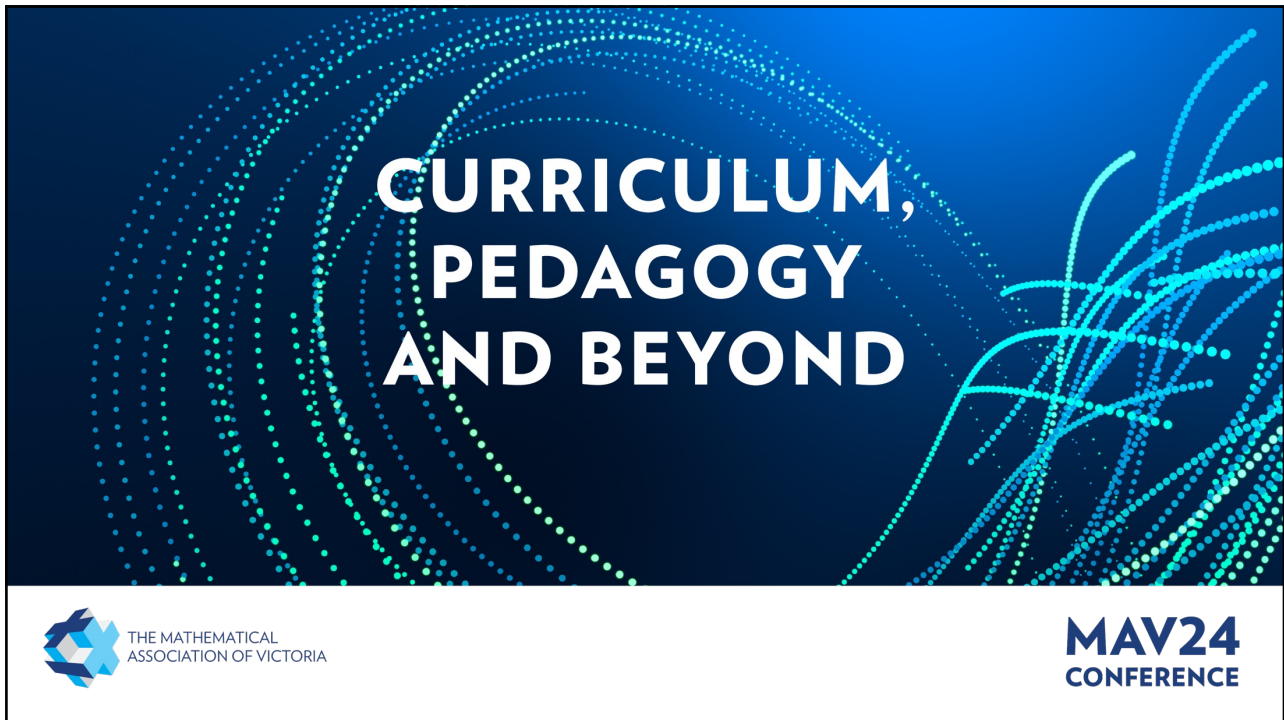
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How Americans voted in 2024



- “The economy ranks as the **most important** of 22 issues that U.S. registered voters say will influence their choice for president” (Brenan, 2024)
- “for many voters, including women, inflation was probably as much if not more of an **issue**” (Catterall, 2024)
- “The public’s judgment of his [Biden’s] performance on two **core issues**—inflation and immigration—was harshly negative, and Harris inherited this disapproval” (Galston, 2024)”

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How Americans voted in 2024



despite ...

- “Some of the Harris team’s final measurements suggested his late wild antics were breaking through and that they **believed** voters were weighing them against the former president. The election results showed the opposite” (Goldmacher et al, 2024)
- “many people following the campaign **thought** that women were going to turn out and that would make the difference. But in fact it didn’t” (Este et al, 2024)
- Only 42% of Americans **believe** that Trump is honest, and 34% would **describe** him as a good role model (Pew Research Centre, 2024)
- 54% of Americans say they are not **confident** “in Trump’s ability to make good decisions about abortion policy. And 59% express little **confidence** in his ability to bring the country closer together” (Pew Research Centre, 2024)

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Road accident



It is 8.55am. You are hurrying to go to the university for a 9am seminar.

Near your destination you came across an accident involving a car and a group of cyclists. Most of them appear to be suffering injuries.

What would you decide to do?

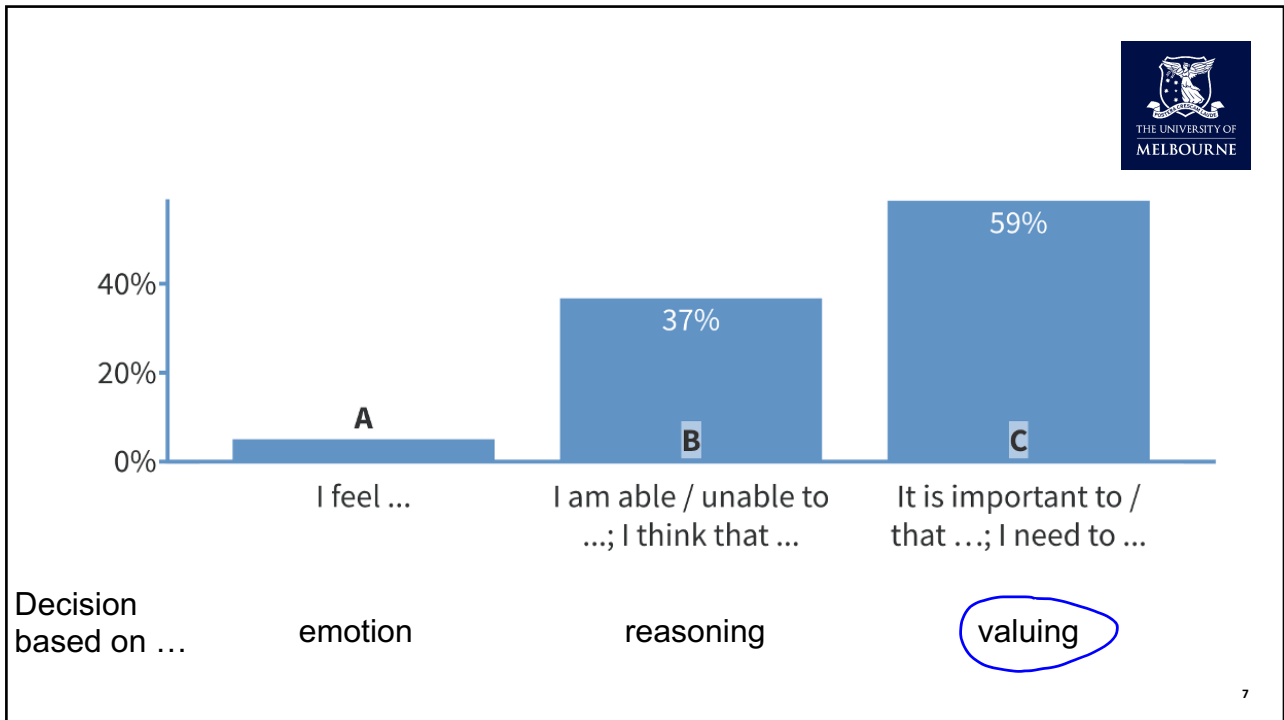
Why did you make this decision?

- (A) I feel like doing it.
- (B) I am able / unable to ...
- (C) It is important to / that
- (B) I think that ...
- (C) I need to
- (A) It makes me feel good ...



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Supporting our Teachers and Students into the future: Valuing the value of values

Wee Tiong SEAH

Faculty of Education, The University of Melbourne

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THE THIRD WAVE PROJECT

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Challenges with mathematics teaching / leading



- Mathematics anxiety
- Negative attitudes
- Student engagement
- Real-world applications
- Mixed-abilities
-
- Mathematics anxiety
- Integrating numeracy
- Content knowledge
- Parental expectations
-

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The student with the yellow and red cards ...



It was some two months into the new school year.

In a Grade 1 mathematics lesson, Ms Z was leading a class discussion regarding the concept of subtraction.

A boy could be seen to be disinterested and disengaged, not participating in the class discussion. For this, Ms Z had issued him a verbal warning, before proceeding with the awarding of yellow followed by red penalty cards, as per her classroom routine.

When the lesson progressed to the group discussion stage, this boy became energised, animated and eager. However, two of his group-mates told him to simply sit there and listen to the others discuss and share.

How might you respond?

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Possible approaches



- Intervene in the particular group discussion, reminding everyone of the importance of working together
- Intervene in the particular group discussion, chiding the two students for not being inclusive of their group-mate.
- Talk to the boy after class, finding out why he seemed to be disengaged during the class discussion, and how he felt during the group discussion.
- Do nothing. Allow the classroom dynamics to 'punish' the boy for his misbehaviour earlier.
- ...

Our chosen approach / action ...



... reflects what we value
in mathematics teaching

... would also teach students what ought
to be valued in mathematics,
maths education, and school education

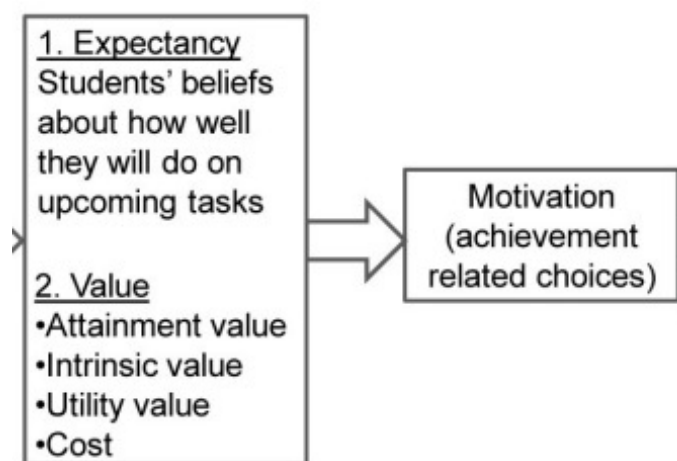


We need to be aware of
our values which guide
our professional decisions and actions,
and ensure that they are consistent
in the minds of our students / colleagues

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Expectancy-Value Theory [EVT]

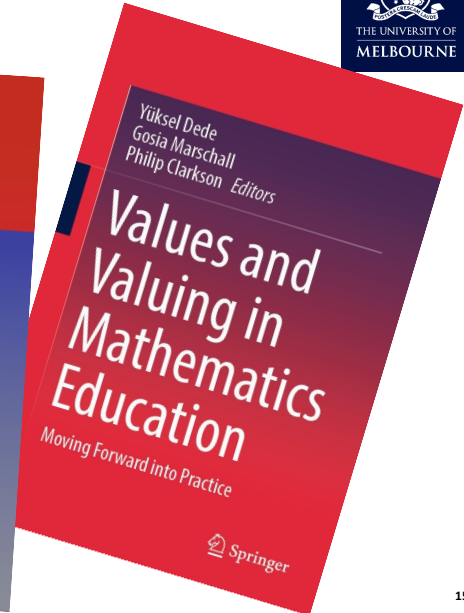
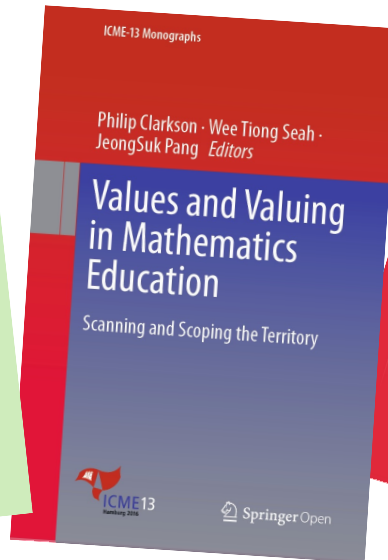
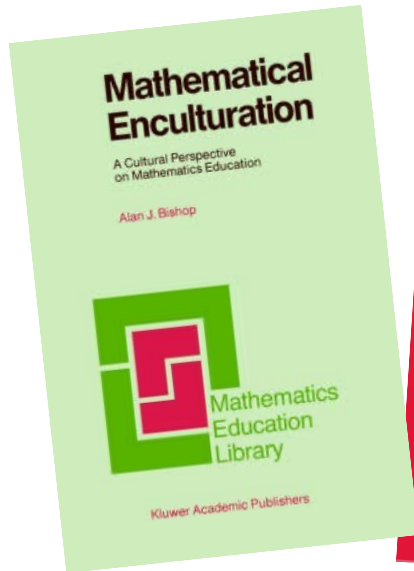


Expectancy-Value Theory

(Eccles et al, 1983)

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Values/valuing in maths education



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Values = ?



**Anything that is important to us
(in teaching and learning)**

A motivating force

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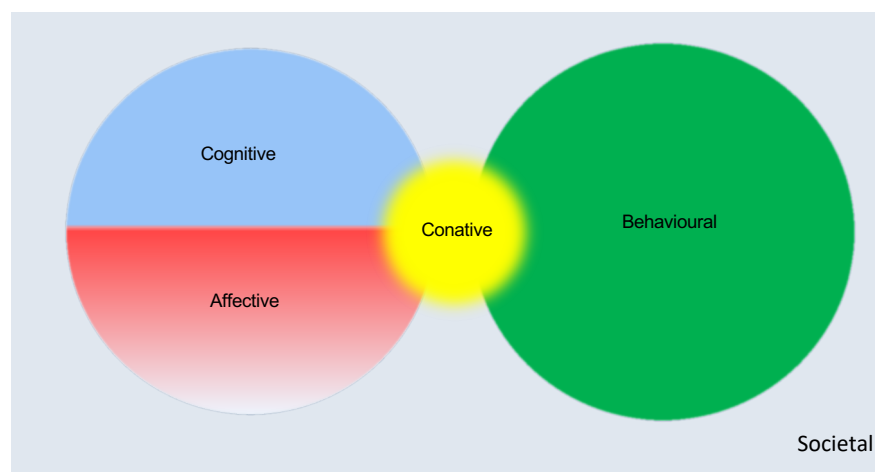
As the saying goes ...



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Contextualising values/valuing

Thinking, Feeling, and Willing



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Values not only regulate
affective and cognitive functions,
but also underlie motivations
that guide decisions / actions.

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Values - what's important
Beliefs - what's true, what's correct



Values	Beliefs
<i>Practice</i>	Regular practice is needed in order to do well in mathematics. Practising with algorithms is more effective than practicing with worded problems.
<i>Confidence</i>	Students' confidence leads to better mathematics outcomes. Boys are more confident about their own mathematical capability compared to girls.
<i>Rationalism</i>	Teachers expect students to demonstrate a logical and rational argument through the steps in the solution.

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Professional values

I. Lesson observation



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Professional values



Values:

- ☐ *Mastery*
- ☐ *Fluency*
- ☐ *Collaboration*
- ☐ *Mentorship*
- ☐ *Openness*
- ☐

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With the values approach ...



- Challenges in classroom (mathematics) teaching and leading
- Students' want-to-learn
- Mathematical Wellbeing [MWB]
- Values alignment
- The roles of sociohistorical philosophies (eg: Confucian, Taoist, etc)
- Beyond the classroom, beyond the grade level



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Fostering enabling values



- Inculcating
- Prioritising
- Values clarification
- Teacher modelling
- Explicit teaching
- JEDI [Justifying – Essaying – Declaring – Identifying]
-

Valuing pedagogies

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What values?

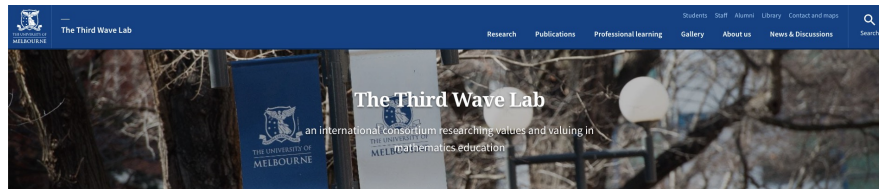


- Mathematics proficiencies (ACARA, 2009);
 - *Fluency*
 - *Problem-solving*
 - *Reasoning*
 - *Understanding*
- Mathematical Wellbeing (Hill et al, 2022)
 - *Accomplishment*
 - *Cognitions*
 - *Engagement*
 - *Meaning*
 - *Perseverance*
 - *Positive emotions*
 - *Relationships*

I had started with this ...



The Third Wave Lab



The Third Wave Lab is part of the Mathematics, Science and Technology Education Academic Group within the Melbourne Graduate School of Education, at The University of Melbourne, Australia. It stimulates and coordinates research studies undertaken by research teams based in more than 20 jurisdictions around the world, with the common approach of harnessing the motivational construct of values to improve mathematics and numeracy teaching and learning.

"Valuing is defined as an individual's embracing of convictions in mathematics pedagogy which are of importance and worth personally"

<https://thirdwavelab.education.unimelb.edu.au/>



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Thank you! Questions, comments welcomed

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Session slides



values THE THIRD WAVE PROJECT

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