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THE MATHEMATICAL  
ASSOCIATION OF VICTORIA

## Breaking down the default setting

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# Breaking down the default setting



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Teacher confidence and teacher efficacy

Effects on students

Examine teacher default settings





Default setting

# Tasks

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## Task 1

There are 13 balls and there are three buckets. There are some balls in each bucket.

How many balls could be in each bucket?

## Task 2

The total cost of a pair of shoes and a pair of sandals is \$87.

I know the shoes cost at least \$50 more than the sandals.

How much might the shoes cost?



# Go to strategies

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For a problem like these:

- 1) What are your 'go to' problem solving strategies?
- 2) What are your 'go to' teaching strategies?

<https://padlet.com/ecorovic/1kfnbngghfrej>

Discuss with a partner



# Confidence and self efficacy

Confidence is a nondescript term that refers to strength of belief but does not necessarily specify what the certainty is about. I can be supremely confident that I will fail at an endeavor

Bandura

Self-efficacy is about having the strong, positive belief that you have the capacity and the skills to achieve your goals

Harris

# Self Efficacy

Self-efficacy is the belief in one's ability to influence events that effect one's life and control over the way these events are experienced. (Bandura, 1994)



# Self Efficacy

Perceptions

Take on, and commitment, to challenge

Belief to cope with stresses

Daily life choices

Context dependent

# Teacher Self Efficacy

Self-efficacy is the belief in one's ability to influence events that effect one's life and control over the way these events are experienced. (Bandura, 1994)

Teacher self efficacy is the teachers' belief they can positively influence students learning.

Teacher self  
efficacy

Powerful

Indirect

Student  
learning

# Impact on student learning In mathematics

Meet learning needs of students  
Choice of maths pedagogy  
Student engagement  
Student engagement strategies  
Decision making

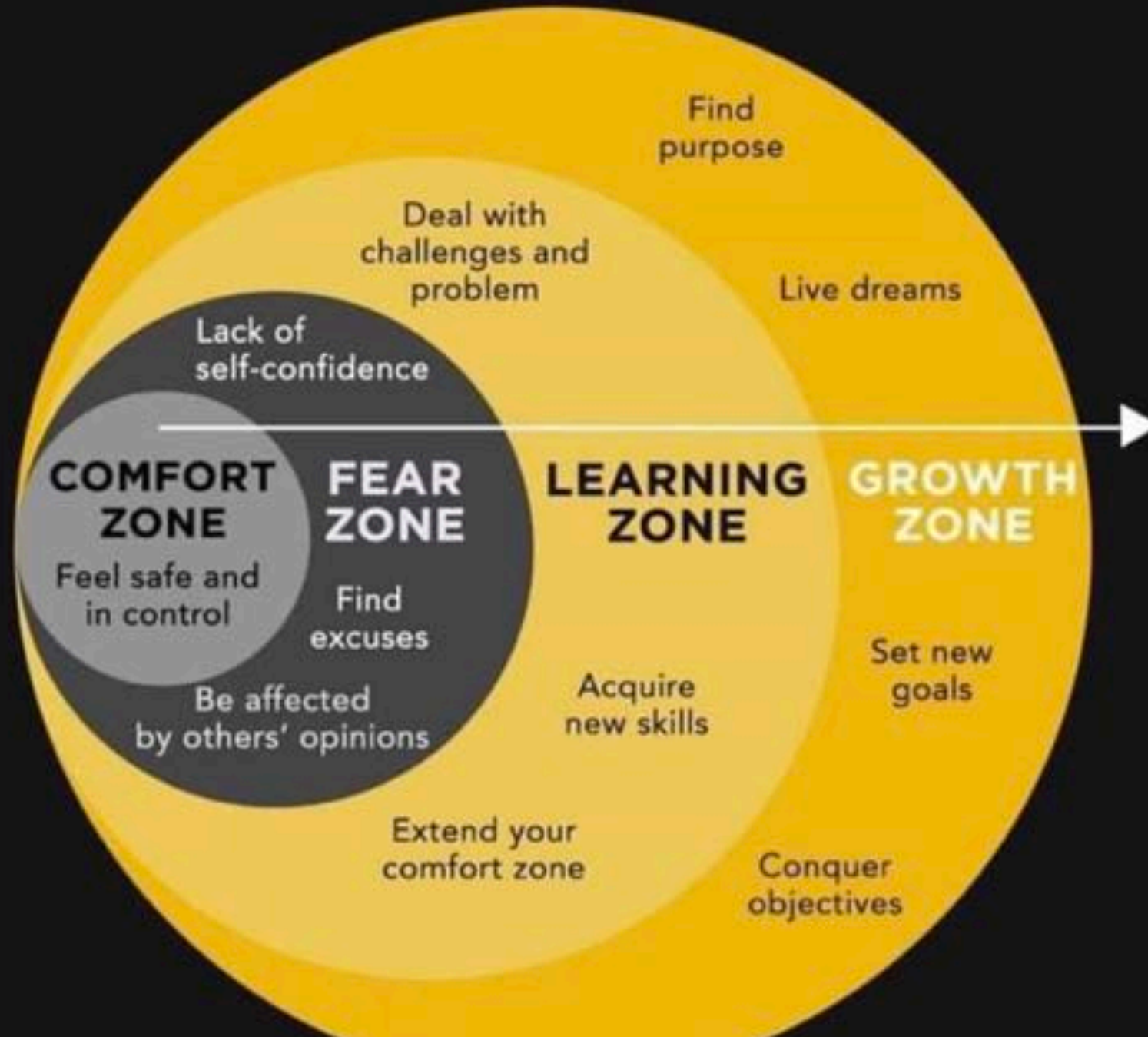


Your default  
teaching setting = Comfort zone



“If the pedagogical approach doesn’t spark joy...” Sullivan

# "The Comfort Zone"





A belief that you can get better as a teacher is the key  
to staying positive about the job.

Dylan Wiliam

# Enhancing teacher efficacy in mathematics



Content knowledge



Pedagogical knowledge &  
Mathematical pedagogical knowledge



Student engagement strategies



Collaboration

# Yet

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There are many things teachers need to make decisions about where there is no research evidence, and also realising that sometimes the research that is available may not be applicable in a particular context.

Dylan Wiliam



How many items of clothing are on the line?





Estimate the range of clothes on the line? Top limit? Bottom limit?

# Task

## Task 1

$$\square + \square + \square = 11$$

What might the missing numbers be?

## Task 2

The cost of a loaf of bread and a birthday cake is \$20. The cake costs \$5 more than the bread. How much might the cake cost?

# Changing your default setting

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What problem solving strategies could you use that challenge your default setting?

What teaching strategies could you use to challenge your default setting.

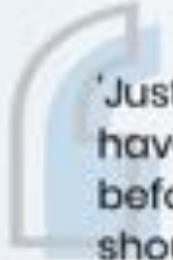
Discuss with a partner

Is there more information that you may need to support your change?

<https://padlet.com/ecorovic/on5yn9bkm1x9>







'Just because you haven't seen it done before doesn't mean you shouldn't do it! Don't be afraid to try new things!'

**'Don't be afraid to change your lesson plan if it is not working ...'**

'Be flexible, a small change can make a big difference.'

**'Be open to change, share and not take feedback personally.'**

'Education is always changing, this is exciting and should be embraced.'


## *Expect change*

'Be passionate, be informed, be open to change, being a teacher is being part of an evolving profession.'

**'Be consistent but open to change and experimentation.'**

**'Keep moving – continue to learn and develop to improve teacher practice. Be open minded to change ...'**

'Talk with people early about changes. Whether it be changes coming up for yourself or changes in the broader context of education.'



If we create a culture where every teacher believes they need to improve, not because they are not good enough, but because they can be even better, there is no limit to what we can achieve.

Dylan Wiliams



# Your default setting

What is one thing you will try that will challenge your default setting?

<https://padlet.com/ecorovic/uxgydmci3q62>







