



# Learned helplessness and maths resilience

- Janet Goodall, University of Bath
- Sue Johnston-Wilder, University of Warwick



Math – The only  
place where people  
can buy 60  
watermelons and no  
one asks them WHY.

# Mother –daughter dyad

Heather  
(Mother)

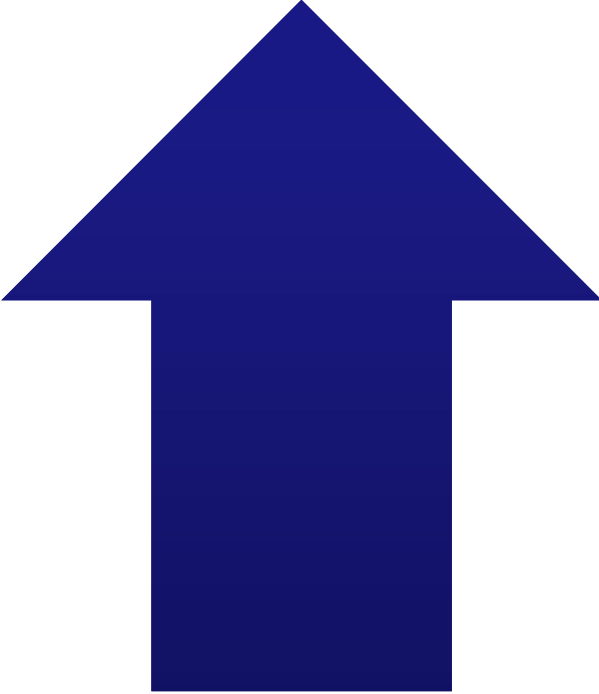
Rose  
(Daughter)

Mathematics



```
graph TD; Heather[Heather (Mother)] --> Mathematics((Mathematics)); Rose[Rose (Daughter)] --> Mathematics;
```

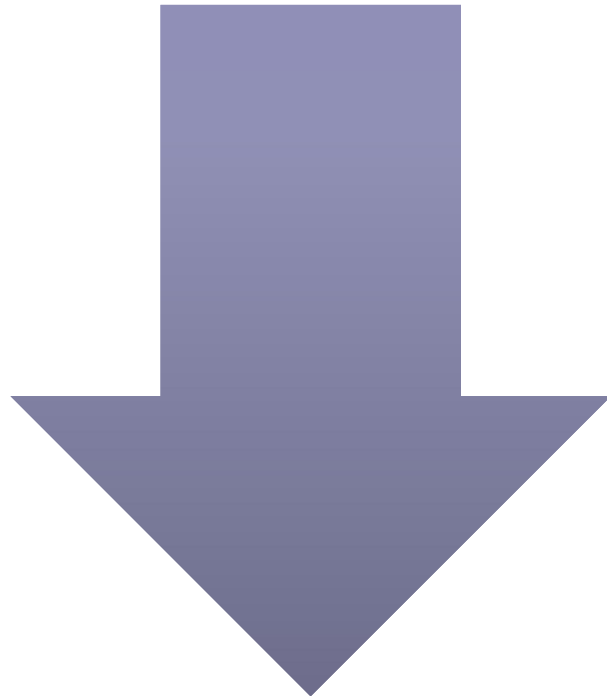
- Interference with adaptive reasoning - when people become convinced that there is no relation between input and output in events [Seligman 1972: 408](#)
- → Belief that one can not control events
- Is about *perception* rather than reality (though the two may overlap)



# Internal helplessness

- The subject can not fix the issue but others could

No amount of effort or ability will change the situation



# External helplessness

- No one can fix the issue

## Heather's story

- Having enjoyed maths till year 6
- Reprimanded by her teacher for using the wrong method to arrive at an answer, and the teacher “made me feel stupid in front of my peers when I explained my methods”.
- Maths became and remained problematic
- Feelings of shame, guilt
- “Calculator is my best friend”

- Fell behind in maths early on
- Lost confidence in own ability
- Accused by teachers of not trying hard enough
- Support promised but did not materialise

- “Swallowed more and more pride” to ask teachers how to help Rose
- Told even if she had GCSE in maths, would not be able to help
- “Best left to the school” – school presenting as owning maths and mathematical knowledge



- Heather asked help of Diana, prepared to be laughed at, “other than shame and embarrassment what did I have to lose?”
- But, “It was like I was asking directions somewhere....”
- “The only major change is confidence, and we’re both so much happier and actually enjoy the subject”

- Hence feelings of “shame” and “guilt”
- Overcome by increased confidence, coming from a \*removal\* of personal blame/guilt

## Recommendations

- Value of parental engagement well known
- Schools and other groups to recognise the importance of PARENTAL maths resilience
- As well as for children/young people