Fail Better
helping students fail to succeed

Sarah Bowers and Julia Denholm
The Impact of Cognitive Science on Post-secondary Teaching

“It is sadly true that most of the way we teach and learn is uninformed by laboratory findings in human cognition.” (Halpern & Hakel, 2002, p. 1)

Tradition: one
Brain research: nil
Failure

“Don’t call it a mistake, call it an education.”
Thomas Edison
Learning from Failure

Ever tried.  
Ever failed.  
No matter.  
Try again.  
Fail again.  
Fail better.

Samuel Beckett  
Worstward Ho (1983)
Productive Failure

“If you're not prepared to be wrong, you'll never come up with anything original.”

Ken Robinson

Desirable Difficulties

MORE DIFFICULT
LESS DIFFICULT
Spacing

- Massed Practice
- Spaced Practice
Spacing

- Spaced Practice (5 problems with 7 day gap)
- Massed Practice (10 problems in 1 day)
Interleaving
Interleaving

Blocked

Mixed
Testing
Testing

A. study + study + study + study
B. study + test + test + test

Tested 5 min, 2 days, 1 week later.

After 5 min, group A did somewhat better.
After 1 week, group B did substantially better.

Roediger, H.L., & Karpke, J.D. (2006)
Caveats

WARNING: UNINTENDED CONSEQUENCES AHEAD
So What?
Sources


Thank you!

Please contact either or both of us for more discussion or additional references.

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