Math vs English: A False Dichotomy

Math and English are neither enemies nor opposites

Edgar Fisher
Adversaries

• “I’m good with numbers, not words.”

• “I don’t like math, I’m good at English.”

• “It’s ok to be bad at math.”
Math & English

• *English = language of region*

• Both useful

• Both require work/practice

• Both needed
Competence

• Competence in English means what?
• Expectations (read, talk)

• Competence in Math means what?
• Expectations (build rockets, bridges, divide big #s)
What is Math?

- Logic/Reasoning
- Number sense
- Short term memory
- Long term memory
What is in English?

- Nouns (objects)
- Verbs (actions)
- Adjectives (description)
- Prepositions (relative description)
- Connections (articles, conjunctions)
Which is Better?

• Depends on the arena.

• Teaching uses language

• Stories need English

• Calculations need Math
Reading is fun!

• I cnduo’t bvleiee taht I culod aulaclty uesdtannrd waht I was rdnaieg. Unisg the icndeblire pweor of the hmuan mnid, aocdcrnig to rseecrah at Cmabrigde Uninervtisy, it dseno’t mttaeer in waht oderr the Iterets in a wrod are, …Tihs is bucseae the huamn mnid deos not raed ervey ltteer by istlef, but the wrod as a wlohe.
Reading is fun!

• Is spelling important?

• How does this affect math teaching?
Reading is fun!

• You this read wrong.
• Ever had that awkward when you read something wrong?
• And said “moment” after awkward?

• How many times did you go back and reread these sentences?
Reading is fun!

• Is every word important?
• Divide by divide into

• How does this affect math teaching?
Dictionaries

• When are they used?

• How are they used?

• Calculator = dictionary
English Eccentricities

• Strange behaviors

• Difficulties with the language

• i.e. vs e.g.
Heterograph
Homograph
Homophone
S
P
M
Synonym
Meaning
Heteronym
Fun with English

• Pronunciation
• Examples for word categories
• Emphasis
• Spelling “rules”
• Pluralization “rules”
Pronunciation

both
bother
boing

moth
mother
doing
Heteronyms

• Wind
• (_____ the clock, _____ in the trees)
• Read
• (_____ last night, _____ a good book)
• Dove
• (___ cooed sweetly, ____ into the lake)
Contronyms

• Same word; opposite meanings
• Dust (to remove/add particles)
• Cleave (separate; attach)
• Custom (normal; special)
• Ravel (entangle; disentangle)
• Bolt (tie down; run away)
Homophones

• to, ...

• pare, ...

• for, ...

• some, ...
Others?
Homonym

fluke

- Stroke of luck
- On an anchor
- Whale’s tail
- Type of fish
Other Words

**Bow**
- take a _____
- to submit
- tie a _____
- shoot a _____

**Bough**
- on a tree
Homophone confusion

• Eye halve knot scene ewe.

• Witch teem one?

• Raze won sighed hire.
English “Rules”

• *i* before *e*, except after *c*, unless sounding like *A* as in *neighbor* or *weigh*.

• coefficient
• science
• weird
Pluralization

- ox → oxen
- goose → geese
- foot → feet
- mouse → mice
- 5 feet tall
# Learning the topics

**Math**
- Memorization
- Patterns
- Consistent Rules
- Recursive
- Denied exposure

**Language**
- Memorization
- Patterns
- Visual, oral, aural
- Cumulative
- Frequent exposure
Math

- Broken rules = ?
- $\sqrt{-1}$
- Universal language

- Discoverable rules (exponent)

- Start learning late (later)
Application

• Point out proficiency in English

• Point out work required to get there

• Point out complexity of English

• Highlight proficiency in Math
Math vs. English

They work together, not conflict.
Questions?

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