

The Power of "Research Shows"

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FYMSiC





- Doing a PhD in Math Education I was faced with a lot of Math Ed “research”
- Teaching teachers about research
- Qualitative vs Quantitative
- Ideology vs Evidence

The Manitoba Story...

In late 2024 the requirements for K-8 teachers to take “breadth” requirements prior to entering Education was eliminated

What happened next?

“The recent changes mean that Manitoba’s teacher certification requirements are better aligned with current research in mathematics education.”

“Notably, research shows that early and middle years teachers (grades K-8) who have taken more undergraduate university courses in mathematics are not more effective teachers of mathematics. That is, their students do not have better outcomes in mathematics.”

“In fact, some studies have shown that K-8 students actually have lower achievement in mathematics if their teachers have more undergraduate courses in mathematics”

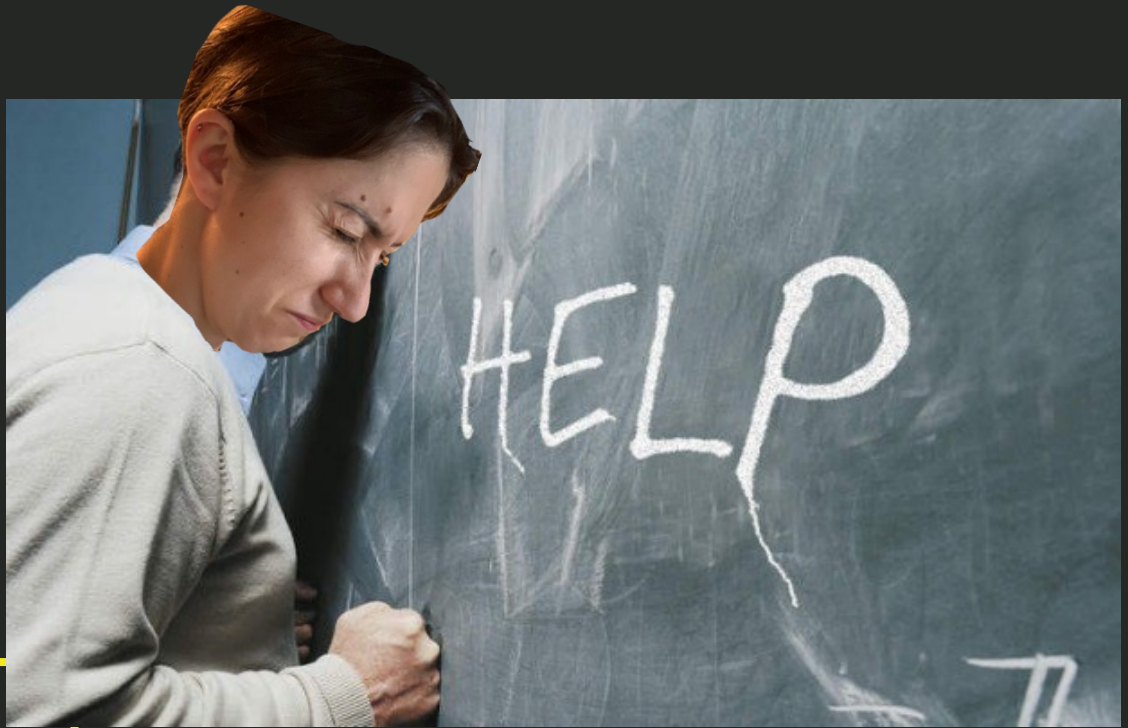
And then...

Since these statements seemed dubious, she was asked to provide supporting evidence. She responded by circulating an eight-page research synopsis referencing 22 articles and books. After reviewing all 22 references, we found that none credibly support the above claims, and some even contradict them.

What
did
we
find?

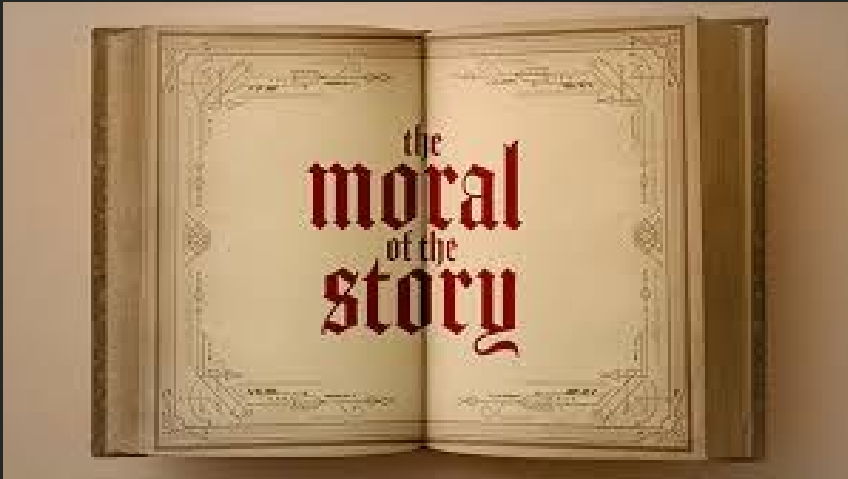
1. Faulty premises and conclusions not aligned with evidence
2. Lack of supporting evidence
3. Serious methodological issues
4. Disregard of contradictory evidence

Example: Several of the cited articles emphasize the need for stronger math content preparation for prospective teachers. One even referred to a recommendation for a minimum of six credit hours in math as an admission requirement for K-8 pre-service teachers!



The Impact

In the Manitoba Legislative Assembly on November 22, 2024, Tracy Schmidt, the Acting Minister of Education and Early Childhood Learning, stated that the amendments to The Education Administration Act “were based on research on math education, not on opinion.”



- Ask questions
- Always dig deeper
- With great power comes great responsibility!

Thank you!

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https://nonpartisaneducation.org/Review/Resources/Fact-checking_research_claims_about_math_education_in_Manitoba.pdf

<https://chalkandtalkpodcast.podbean.com/e/red-flags-in-education-research-with-ben-solomon-ep-23/>

<https://www3.ohrc.on.ca/en/right-read-inquiry-report-0>