

Using Adapted Alternating Treatments Designs to Determine What Works and What Works Better

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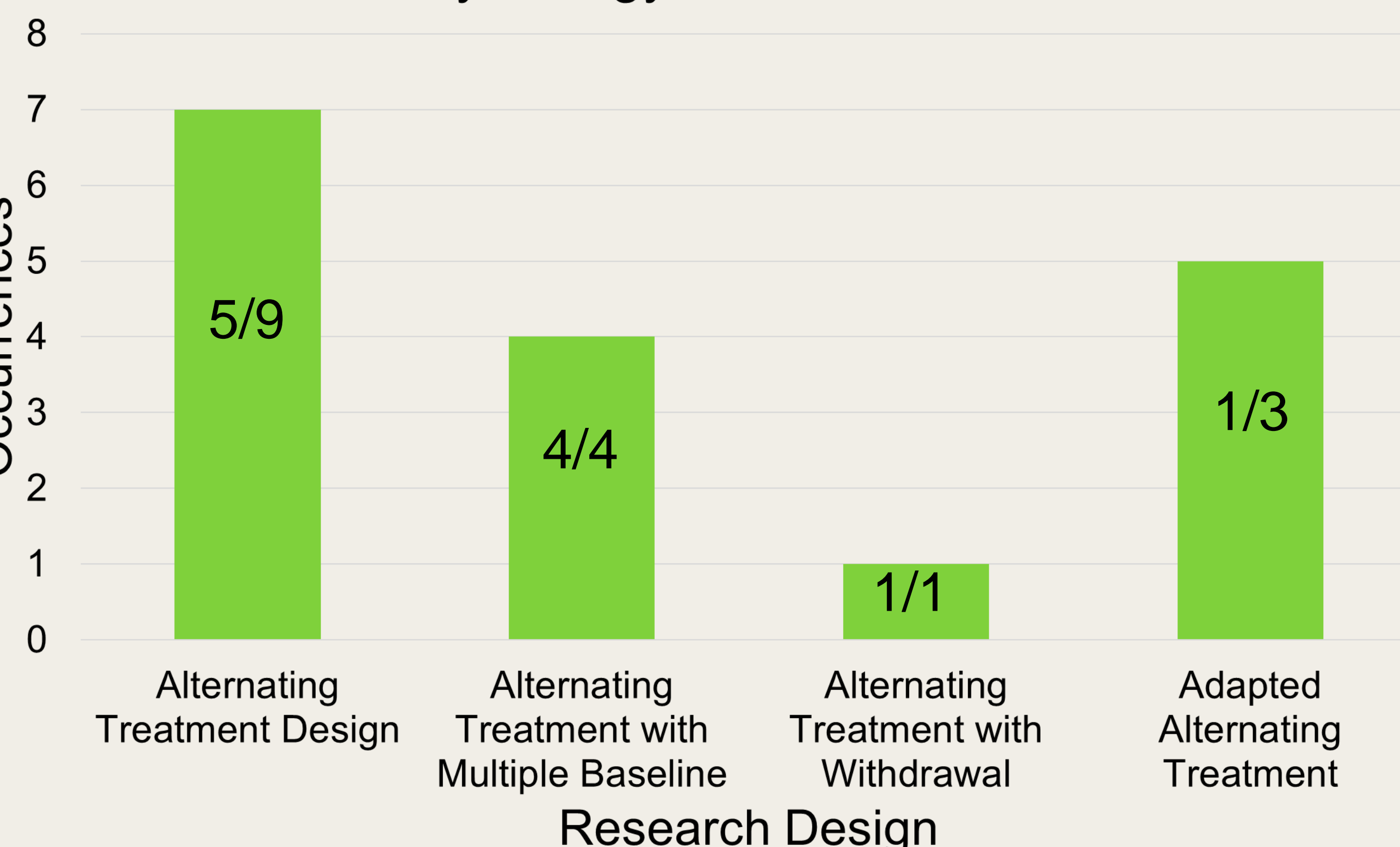
Alternating Treatment Design

- A design meant to compare the effectiveness of two or more treatments.
- We need to know what works best.
- However, this design overlooks important threats to internal validity.

Alternating Treatment Design in Literature

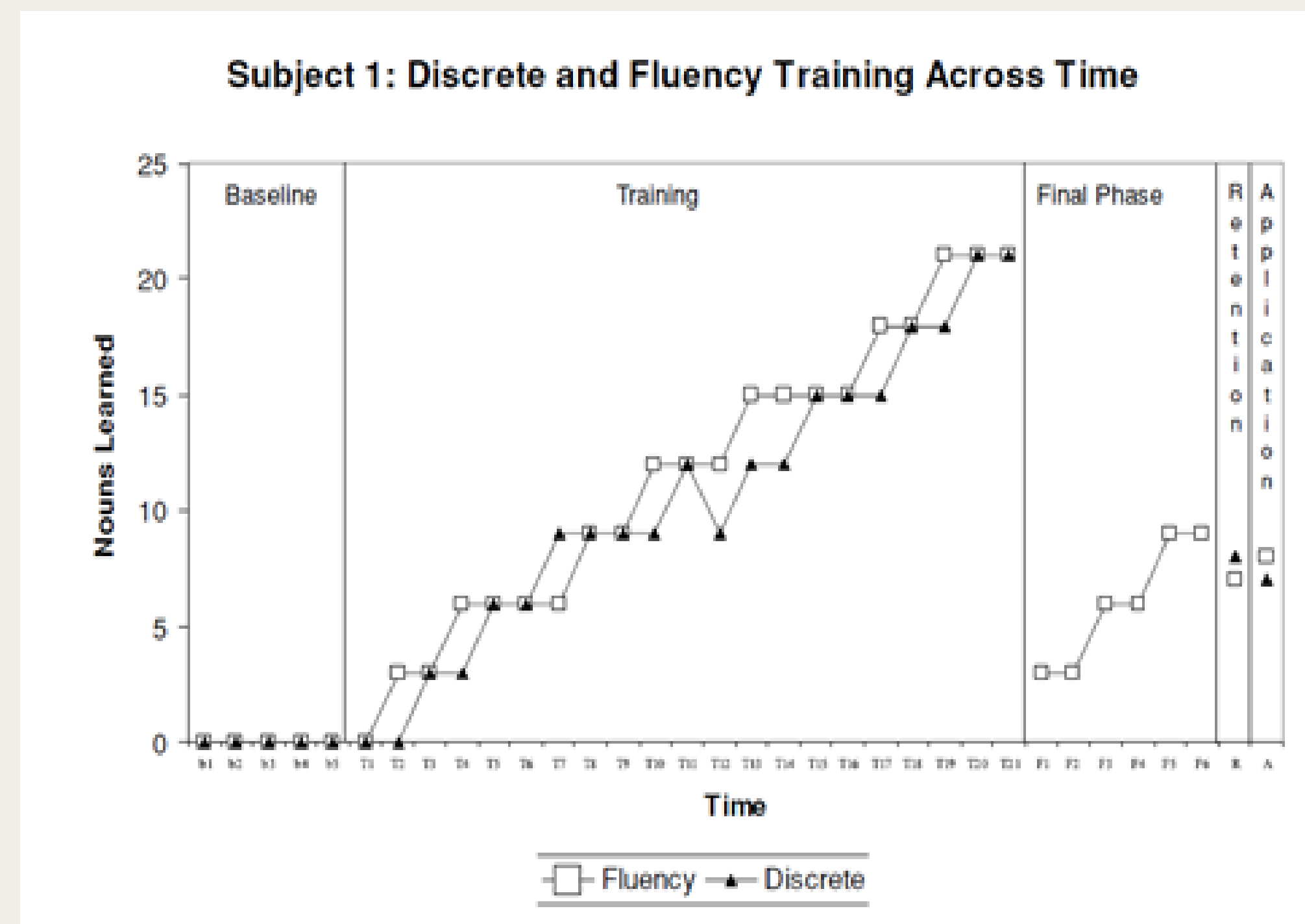
- Researchers searched 5 school psychology journals for articles using alternating treatments to examine interpretations of the design:
 - *School Psychology Review*
 - *Psychology in the Schools*
 - *School Psychology Quarterly*
 - *Journal of School Psychology*
 - *Journal of Applied School Psychology*

School Psychology Journals 2007-2017

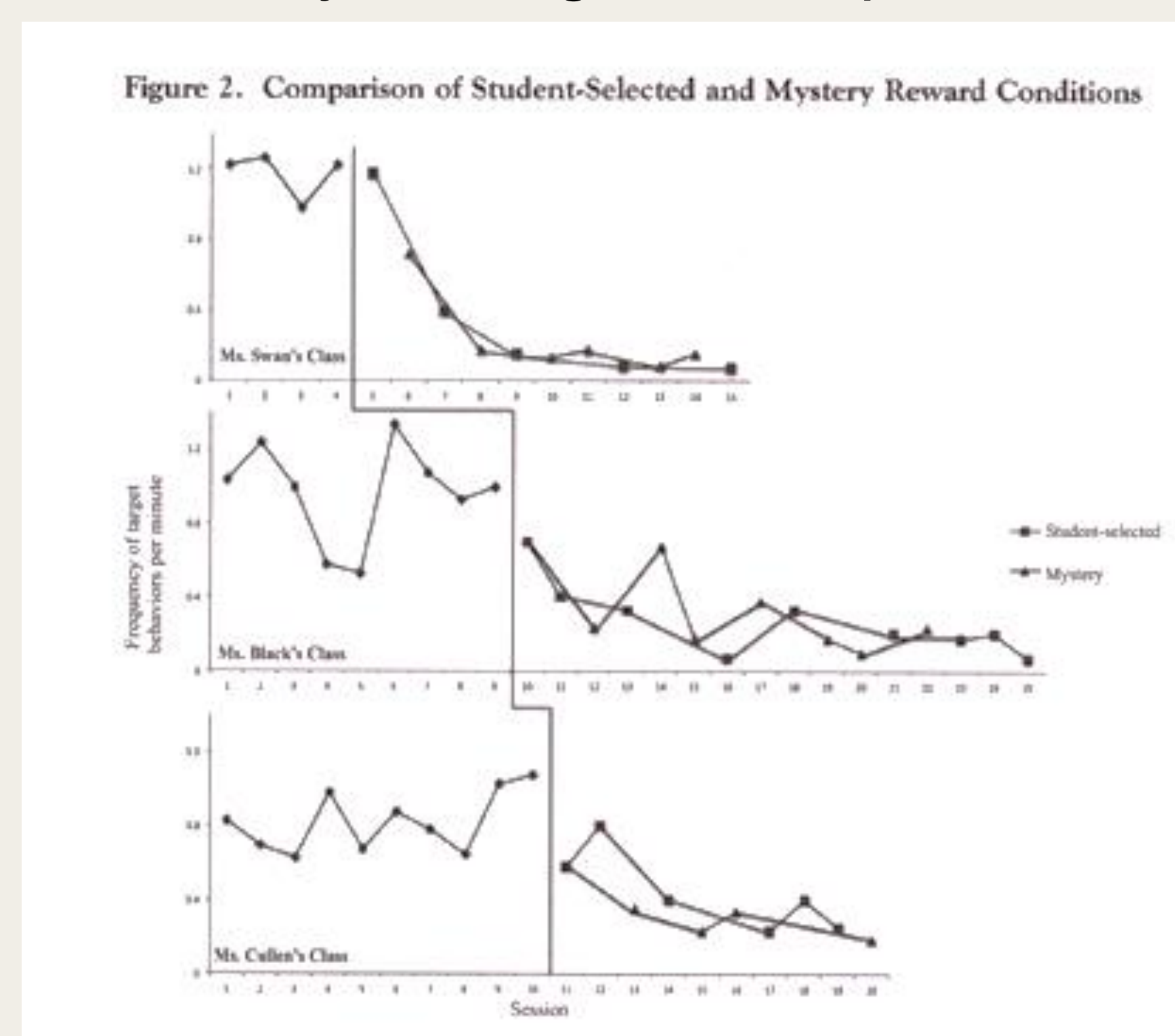


*Fraction of articles where the researchers conclude that both interventions are similarly effective.

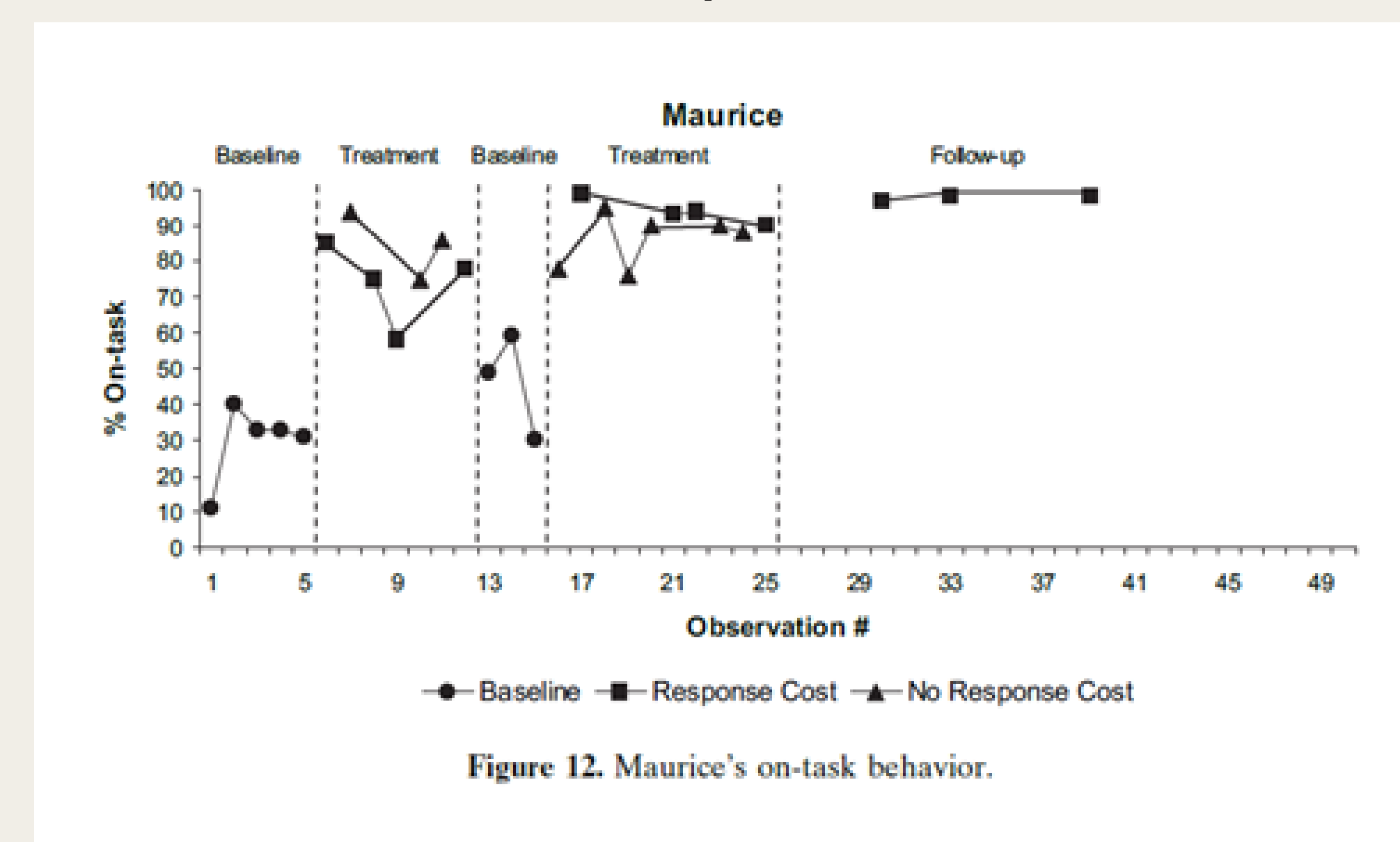
Inaccurate Conclusions



Does not control for history, testing, or multiple treatment interference



Does not control for multiple treatment interference



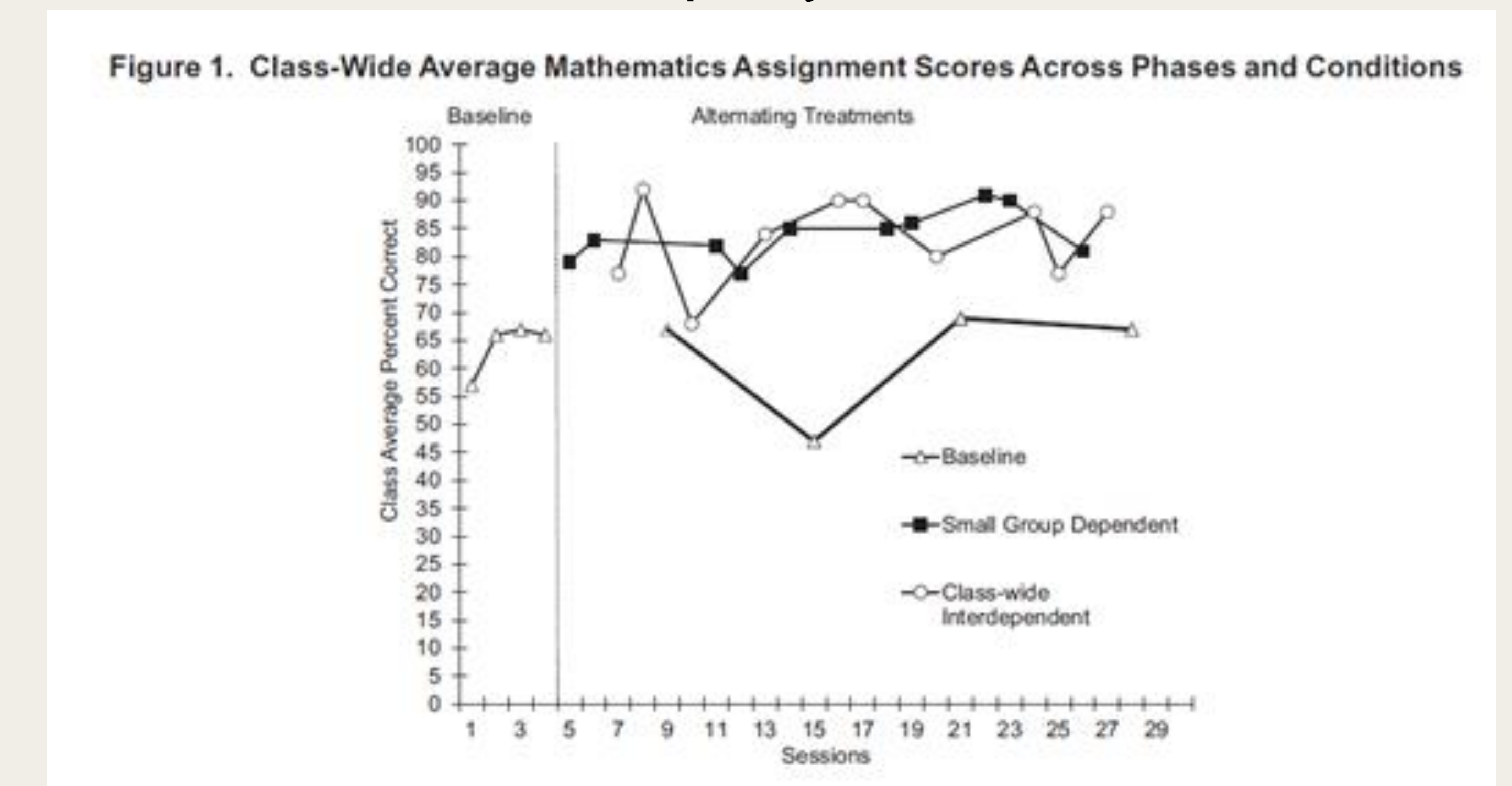
Does not control for multiple treatment interference

Threats to Internal Validity

- **History, Testing, Multiple Treatment Interference, Maturation, Instrumentation, Statistical Regression to the Mean, Mortality, Interactions**

Solution: Adapted Alternating Treatments Design

- A no-treatment data series is applied during the alternating treatment phase to assess for all threats to internal validity, including spillover effects.
- This allows for the conclusion that both treatments were equally effective



References

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