

# Prescribing the Perfect Prescription; Pharmacist-led education for final year medical students

## Background

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Prescribing is an unavoidable task for all doctors. Medical students recognize they lack the confidence, knowledge and ability to prescribe safely – often feeling under prepared for this task.<sup>3</sup> If performed poorly this can lead to patient harm and increase cost to the health sector. We propose pharmacists are well placed to provide this type of education to final year medical students.<sup>4</sup>

## Aim

Assess if a pharmacist-led education session on prescription writing for final year medical students improves the quality and safety of prescribing skills.

## Method

**Participants and intervention:** Randomised controlled trial using a pre- and post-test assessment on final year medical students. Students were randomised into two groups - tutorial group (TG) and non-tutorial group (NTG). TG received an education session by a clinical pharmacist and pharmacy educator using case-based learning. NTG received no additional education. Following the pre-test, students completed a three-week tertiary hospital placement on the medical wards. Students completed the post-test after the placement.

**Student assessment:** Schedule 4 (S4, prescription only), Schedule 8 (S8, controlled drug), S4 streamline (S4SL), and Mixed case (S4 and S8) prescriptions were assessed.

**Statistical analysis:** Data was collated in Microsoft Excel and imported to IBM SPSS Statistics (Version 25, IBM Corporation) for statistical analysis.

**Ethics:** The Townsville Hospital Human Research and Ethics Committee approved this study and James Cook University Townsville Ethics committee endorsed it.

## Results

There were no significant differences at baseline for the groups scores or proportion of passes. Statistical analysis demonstrated the TG significantly improved their overall score from pre- to post-test ( $p=0.012$ ) whereas the NTG overall score significantly decreased ( $p=0.004$ ). The number of cases passed overall was significantly more in the TG than NTG ( $p<0.001$ ).

## Conclusion

It was clearly demonstrated that education by a clinical pharmacist improved the prescribing skills of final year medical students in this study. Students learning from peers on placement as their primary form of prescribing education decreased prescribing skills.

## What next?

- Multisite study including a larger cohort
- Longitudinal follows of students to determine longer term benefit of education
- Trial inputting Clinical Pharmacist education sessions into Medical school education.

## References

1. James Cook University, College of Public Health, Medical and Veterinary Sciences
2. The Townsville Hospital, Australia
3. Coombes I, Mitchell C, Stowasser D. Safe medication practice tutorials: a practical approach to preparing prescribers. *Clin Teach*. 2007; 4(3): 128-134
4. Mokrzecki S, Pain T, Perks, S. Teaching the art of prescribing, can pharmacists bridge the gap: a narrative review. *Unpublished work*. 2018

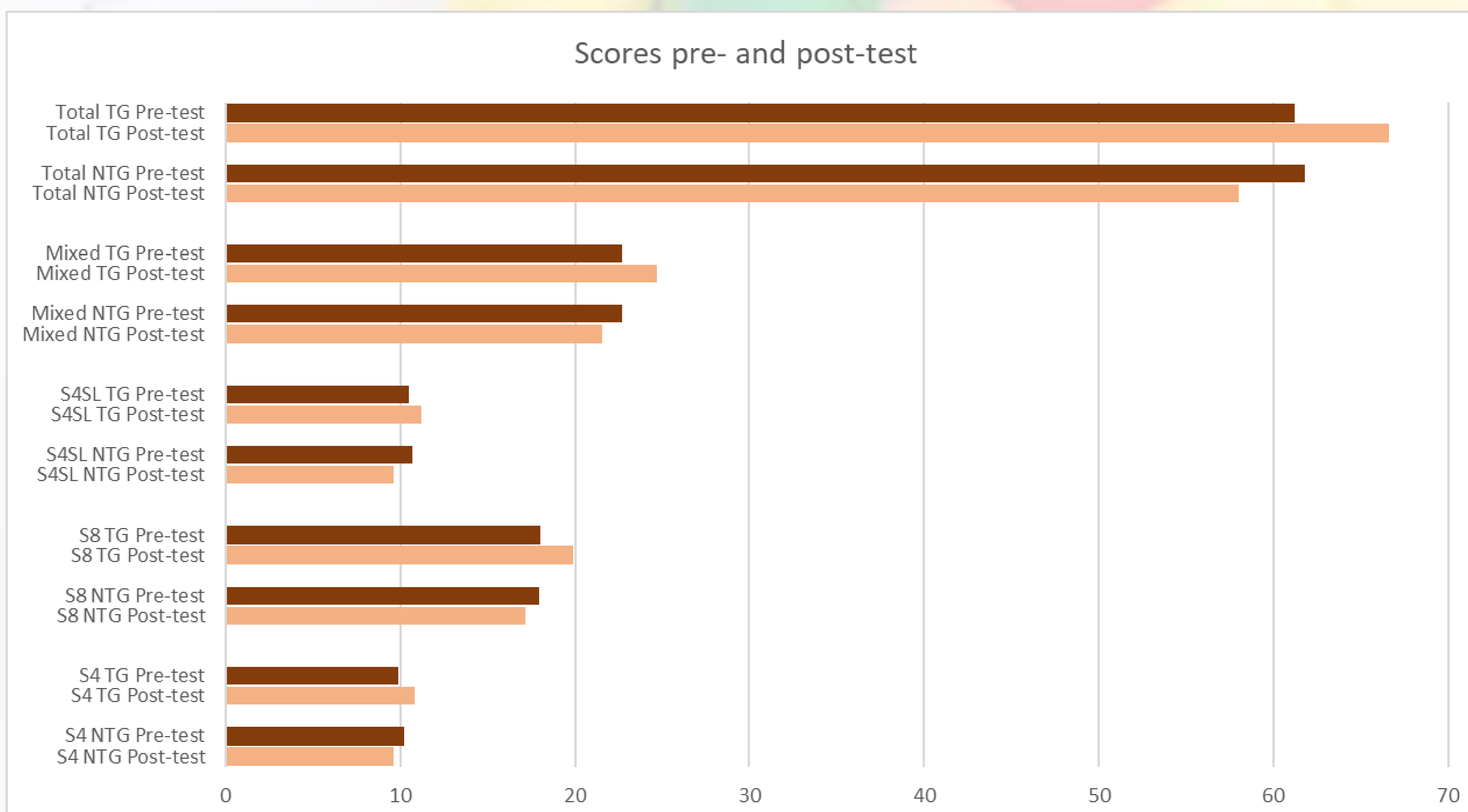


Figure 1: Graphical representation of the mean individual case scores pre- and post-test for TG and NTG demonstrating increased scores for the TG and decreased scores for the NTG.

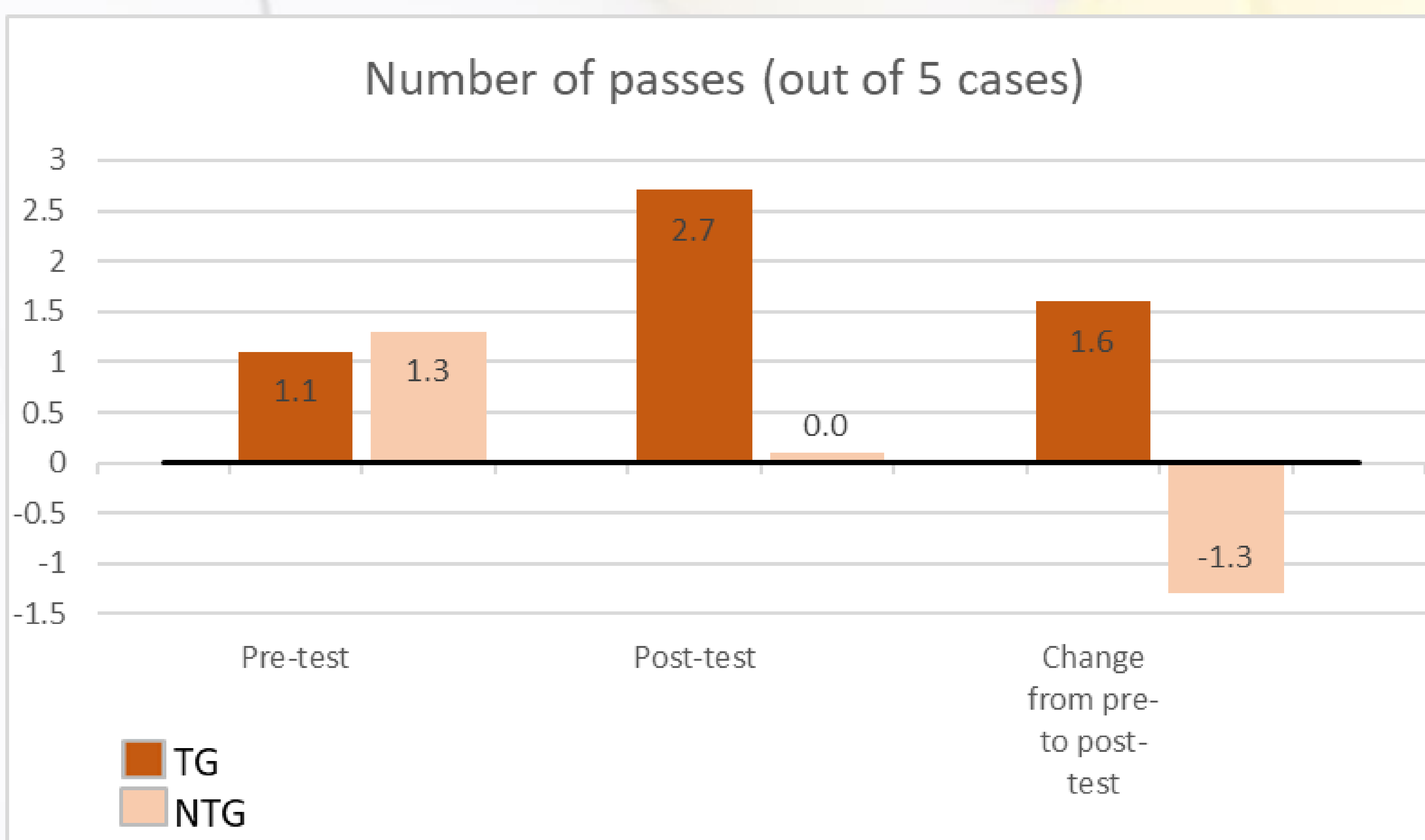


Figure 2: Pre- and Post-test passes for students, assessing the change between TG and NTG