

# Near-peer Teaching: A Method for Improving Medical Student Performance

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## Background

*What are the benefits of near-peer teaching?*

- The tutor revisits and reinforces previously learned topics while also honing the skills necessary for a future physician, including teaching and leadership skills (1).
- Near-peer teaching can relieve teaching demands on the medical faculty without compromising education (2).
- Learners are subjectively satisfied by near-peer teaching (3).
- Near-peer teachers are built-in role models for junior students (4).

*Why are learners satisfied by near-peer teaching?*

The concept of “social and cognitive congruence” describes how near-peer instructors have recently experienced not only the subject content being taught, but also the overall shared struggles of medical school (4).

## PURPOSE

This study aims to demonstrate a benefit of near-peer teaching in medical education not only qualitatively in student satisfaction but also quantitatively on course exam scores.

## METHODS

The near-peer teacher (third-year medical student) wrote a ten-question pre-test and constructed an hour-long vascular neurology review session. Learners (first-year medical students) were given the pre-test and invited to attend the session in the week before their clinical neurology course exam. The same pre-test was re-administered as a post-test after the session. No feedback was provided between pre- and post-test. After the course exam, students completed a survey to report demographics as well as previous exposure to neuroscience and to provide feedback on the session.

## RESULTS

	N	Percent correct of stroke questions
Group 1	74	82.1%
Group 2	71	76.5%

**Table 1.** Group 1 comprises all learners who participated in the study to some extent (at the minimum, completing the pre-test). Group 2 comprises all other first-year medical students. Group 1 performed nearly 6% better on the stroke questions of the neurology course exam. [p-value = 0.026]

	N	Percent correct of stroke questions
Group X	32	82.14%
Group Y	42	81.97%
Group Z	71	76.46%

**Table 2.** Group X comprises all learners who participated in the review session to some extent (in-person or remotely). Group Y comprises those who just completed the pre-test. Group Z comprises all other students. Group X performed marginally better than Group Y, who performed appreciably better than Group Z on the stroke questions. [p-value = 0.038, co-variate = score on the prior neurology course exam]

	Integration of previously learned material	Methodical approach to test questions	Focus on the most important topics
# of students (n = 32)	21	21	15

**Table 3.** A total of 32 students engaged with the review session. Of the 32 students, 29 reported being satisfied. Of the 29 satisfied students, 22 attributed their satisfaction to the teacher’s status as a student and peer. Also, of the 29 satisfied students, they reported what, if any, themes contributed to their satisfaction. The majority of learners appreciated the near-peer teacher’s emphasis on integrating previously learned material and on test-taking skills.

## DISCUSSION

In this study, near-peer teaching not only benefitted learners by providing a subjectively satisfying experience, but also by improving their performance on their course exam (Tables 1, 2). The impact on exam performance is best understood in conjunction with the learners’ feedback (Table 3), which reinforces the concept of social and cognitive congruence.

**1. Fragmented medical education.** Near-peer teachers have the benefit of intimately knowing what is taught in each course. Therefore, they can more intentionally **integrate** previously learned material into current instruction.

**2. Test-taking skills.** Being proximal to board exams, the near-peer teacher retains social congruence and an appreciation for developing **methods** of test-taking.

**3. “Boards” vs. “wards.”** Near-peer teachers, who have some exposure to the wards while being proximal to boards, are uniquely positioned to help learners **focus** on the most relevant material.

On the student-teacher side, this experience was incredibly rewarding for multiple reasons:

- Reinforced previously learned vascular neurology content
- Offered an opportunity to practice leadership as well as teaching skills
- Gratifying to provide support and giving back to peers

## REFERENCES

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