

## Can we improve physiology tutorials? An assessment of targeted vs. non-targeted tutorials

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### ABSTRACT

#### Introduction

Tutorials are an established method of learning which is meant to reinforce knowledge and encourage a deep approach to learning. Our main objective is to assess differences in learning following general reading on a topic before a tutorial (Non-targeted tutorial) vs. targeted reading based on finding answers to specified questions (Targeted tutorial). The Department of Physiology, Faculty of Medicine currently conducts targeted tutorials for first and second year medical students.

#### Method

First year medical students were randomly allocated to 4 tutorial groups. A pre test comprising of 15 MCQs based on the **autonomic** nervous system was administered immediately after completion of lectures to the whole batch. Two tutorial groups were subjected to non-targeted tutorials and 3 days later, the other two were subjected to targeted tutorials. The same MCQs were administered immediately after tutorials to all groups as a post test. Questionnaires to evaluate tutorials were administered at the same time.

#### Results

158 students were involved in the study (78 males, 80 females). The pre and post-test results and improvement in results after the tutorial did not significantly differ in the targeted (pre=5.7, post=8.7, improvement<sup>^</sup>) and non-targeted (pre<sup>^</sup>6.2, post=9. improvement=2.9) groups. Females (mean mark 9.9) perform better after tutorials than males (mean mark 8.0) though statistically this was insignificant (p=0.076). Improvement in results after non-targeted tutorials in males was significantly better (p<0.05) than in females (male=3.3, female=2.7) while females perform better (p<0.05) after targeted tutorials (males =2.3, females =4.0). 87% of the students subjected to non-targeted tutorials, preferred to continue it, while 51% of the targeted group wished to continue with that type of tutorial.

#### Conclusions

There was no overall difference in learning outcome between targeted and non-targeted tutorial groups. Females perform significantly better after targeted tutorials while males perform significantly better following non-targeted tutorials. Students introduced to non-targeted tutorials preferred this method with 87% wanting to continue it.