Writing Questions as a Preparatory Method for the American Board of Surgery In-Training Examination (ABSITE): A Multicenter Randomized Trial

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Since 1975 the American Board of Surgery (ABS) offers the ABSITE annually to ACGME accredited general surgery residency programs. Program directors can use ABSITE results as an evaluation tool to assess educational experience of residents and the ability of the program to educate them. At the completion of a residency, it is expected that the newly graduates will progress to certification by the ABS by completing first the ABS Qualifying Examination (ABS-QE) and subsequently the ABS Certifying Examination (ABS-CE). Different studies have shown a strong relationship between ABSITE scores and first time pass rates for both of the ABS board examinations. Early identification of residents with low ABSITE scores, implementation of reading assignments and brief practice examinations are some of the strategies programs have incorporated into their curriculum to improve their passing rates. Many educators postulate that knowledge acquisition occurring during study and testing serves solely as a method of measuring knowledge rather than producing it. The predominant teaching/learning model involves repeated study sessions followed by a test session. A less commonly used learning strategy is one in which students generate questions as study materials. Generating questions contributes to a deeper level of understanding, which Wittrock termed the “generative effect.” This strategy is rooted in the levels of processing theory of cognition, which suggests that the more deeply information is processed the more likely it will be remembered. Additionally, constructivist learning theory posits that learners interact with knowledge to reformulate given information, generate new cognitive structures, and link information to what the learner already knows. Research has shown that students who generate questions as study materials perform better than simply studying materials generated by others, taking notes, and not generating questions. The proposed study has two aims. First, we will examine the effects of writing questions on ABSITE performance using a multi-center, randomized trial. We hypothesize that residents who write practice test questions will perform better on the ABSITE than residents who do not write questions. Second, we will evaluate the relationship between question quality and ABSITE performance. High-quality questions indicate that a resident has engaged in deeper processing, and thus we hypothesize that residents who have higher question-related mechanics, content, and quality scores will achieve higher ABSITE scores than residents who have lower question rating scores. In addition to examining performance on the 2014 ABSITE, we will also examine percent improvement in ABSITE scores from the previous year for residents at the PGY2 level and above.