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Training for Critical thinking: Using Reflective Questions as a Guide

In the era of information outbreak, we face various valid information and tremendous fake news that perpetuates our lives. With the help of social media platforms, fake news could distort election results, affect public perceptions, and shape human emotions. Not only do we need to perfect computer algorithms to reduce exposure of those fake news, but we need to equip ourselves with the ability to combat them as well. Critical thinking, which is characterized by the ability to evaluate, synthesize, analyze, and apply the newly-presented information, can be important in fake news detection. Past studies have shown that people with lower CRT(Critical Thinking Test) scores are correlated with a higher frequency of sharing misinformation online. Here we propose a critical thinking training program using questioning techniques. We design all our questions to be open-ended, aiming at guiding participants towards their self-discovery on how to manipulate and evaluate new information before coming to a conclusion. We would recruit 200 participants from the online platform Prolific, having them complete a survey. During the survey, they will be reading either a short story or a piece of critical reading related to COVID-19 vaccines. The experimental group would then be asked several reflective questions, requiring deeper thought and evaluation of the article, while the control group would be simply asked several questions on how they like the article. Manipulation check questions and in total 15 fake news assessments would be presented following the questions, where participants need to rate their accuracy and likelihood of sharing. Demographic information on age, gender, and educational level will be collected in the last stage. We hypothesize that after controlling for educational level, going through reflective questions would enable participants to show a short-term boost in critical thinking ability, thus being able to discern quality information from fake news. We also hypothesize that critical thinking ability would be domain-general, not depending on the article content they have just read. The study can be significant in the information age, such that discernment ability is essential in order not to get carried away by so-called "opinion leaders". Future studies could aim at making the training session into a long-term program in forming critical thinking habits and expanding the program to a broader audience.