**Voices’ Influence on Effort Ratings and Recall Performance**

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 Computer-generated speech is becoming more commonplace in classrooms, so it is important to examine the impact of computer voice effect on students’ cognitive effort and recall performance. Some studies have examined how voice-rendering type (human, classic computer voice, and modern computer voice) affect cognitive effort and recall, but most of these studies include some form of visual aid and do not focus solely on voice effect. The current study investigated participants’ recall performance and effort ratings of an audio agent when the information is presented by either a classic audio engine, a modern audio engine, or a human voice. In an online setting, participants were placed under cognitive stress by being presented with a 5-digit number to memorize for 15 seconds and then instructed to listen to an audio lecture divided into three segments. Each segment of the audio lecture was presented by a different voice. Participants were asked to recall the 5-digit number after each lecture segment. Then participants rated their effort on each segment’s task. Lastly, participants answered free recall and multiple-choice questions about the content of the audio lecture. The findings indicated that voice-type had a medium-size effect on effort. Participants rated the classic voice as demanding the most effort and the human voice demanding the least effort. Participants also had the best recall performance in the human voice condition and the worst recall performance in the classic voice condition. These findings have important implications for the design of voice assistants, screen readers, or educational materials.