Department of English
Program in English as a Second Language
5134 Helen C. White Hall

English as a Second Language Assessment Test

Reading and Writing

For this test, you will have **50 minutes** to read the article and write a composition on it.

The composition will be evaluated for **reading ability** (understanding of the article), **writing ability** (use of the article and organization of your ideas), and **language use** (vocabulary and grammar).

INSTRUCTIONS:

1. Read the article.
2. Write a composition in which you **briefly summarize the article and present your opinion** of the ideas expressed in the article. Be sure to do both in your composition.
3. Make sure you give reasons for your opinion.
4. Do not copy sentences from the article.

RECOMMENDATION:

1. You will receive a recommendation for an ESL class based on your essay.
2. All students take a diagnostic test on the first day of class. Your initial recommendation may be adjusted if necessary.

CAN CHILDREN LEARN FROM ROBOTS?

In recent years, parents and schools have been exposing children to a range of computer-mediated instruction, and adults have been turning to "brain training" apps to sharpen their minds, but the results have not been encouraging. A six-year research project commissioned by the Department of Education examined different cybertechnology programs across thousands of students in hundreds of schools and found little to no evidence that they improved academic performance.

In our view, the problem stems partly from the fact that the designers of these technologies rely on an erroneous set of assumptions about how the mind learns. Yes, the human brain is an amazing information processor, but it evolved to take in, analyze and store information in a specific way: through social interaction. For millenniums, the environs in which we learned best were social ones. It was through other people's testimony or through interactive discourse and exploration with them that we learned facts about our world and new ways of solving problems. And it's precisely because of this history that we can expect the mind to be socially tuned, meaning that it should rely on and incorporate social cues to facilitate learning.

When it comes to most educational technology, this insight has been ignored. Even those technologies that make use of virtual agents or videos of human speakers lack the give-and-take that defines true social interaction, where the verbal and nonverbal cues of one party are dynamically responsive to those of the other.

To investigate the importance such social cues might play in learning from technology, we conducted a study with 4- to 7-year-old children from schools in Boston. The children listened to a story read by a robot that looked like a cute plush creature with an animated face that allowed for emotional expressions and eye and mouth movements. For half the children, the robot made use of these capabilities, responding to events in the story and to the children's answers to its questions in a manner that expressed typical social and emotional cues. For the other children, the robot was "flat": It told the same story but didn't emit or respond with the typically expected cues.

As the children listened to the story, we measured their engagement and attention using automated software to track facial, head and eye movements. To gauge their understanding and use of the new vocabulary words embedded in the story, we had the children retell the story to a puppet both immediately afterward and again after a four- to six-week delay.

Our results showed that the children's learning and engagement were heightened in the presence of appropriate social cues. Among those children who recalled and correctly used at least one of the target vocabulary words during the immediate retelling of the story, the total number used was greater for those who listened to the expressive robot than for those who listened to the flat one. Moreover, children who interacted with the expressive robot showed greater levels of concentration and engagement during the listening task.

But perhaps the biggest effects were seen in long-term retention. When the children returned weeks later to retell the story, those who had initially heard it from the flat robot showed a decrease in the length and detail of their retold story, whereas those who heard it from the expressive robot retained the information they had heard. Put simply, children were not only more attentive to and motivated by a socially expressive robot, but they also processed what they learned from it more deeply.

The upshot of these findings is clear. If we want to use technology to help people learn, we have to provide information in the way the human mind evolved to receive it. We have to speak the mind's language, and that includes the language not only of information but also of social cues. Failing to do so will continue to artificially limit the gains that educational technology promises to offer.