Written Text & Spoken Word Do Not Mix

Psychology

Dichotic Listening:
When trying to listen to two simultaneous speakers, we can listen to and understand only one at a time - attempts to listen to both results in neither being understood.

Similarly, when trying to read and listen to a speaker, we can attend to and understand only one at a time - attempts to understand both results in neither being understood.

Education

The Redundancy Principle
Students presented with either auditory or written forms of material often demonstrate more rapid and more accurate learning than those presented with both forms of material.

Students presented with a text-based teaching aid (PowerPoint) during an oral lecture often display a reduction in information retention and impaired exam performance.

Neuroscience

This is the brain of a person READING WORDS

This is the brain of a person LISTENING TO WORDS

Classroom Applications

When utilizing PowerPoint, the whiteboard, or hand-outs during an oral lecture/lesson, avoid the inclusion of text as much as possible.

When designing a self-guided computer-based lecture/lesson, avoid including oral and textual instructions together (chose one or the other).

When distributing text-based hand-outs or lecture notes to students, try to do so at the end of the lecture/lesson (to avoid attempted reading during the oral presentation).

Ideas and Future Questions...

There is evidence that writing utilizes similar neural structures as reading and listening to oral speech. How might this impact note-taking during a lecture/lesson?