Teachers of deaf students frequently emphasize the importance of utilizing visual materials in the classroom, but little attention has been given to the extent to which deaf students are able to divide their attention among the instructor, an interpreter/real-time text, visual displays and/or computers, and their own notes/textbooks/pagers. Several studies over the past 20 years appear to have demonstrated that deaf individuals, and particularly those who are native signers, have better peripheral vision than either hearing peers or oral deaf individuals. Such abilities might offset the potential confronted by deaf students in multimedia classrooms or others in which instructors utilize visual materials. Three experiments explored how "oral," "signing," and hearing college students deal with dividing attention during classroom lectures in which they are confronted with multiple sources of visual information. Results are consistent with recent findings concerning the locus of visuospatial differences between deaf and hearing individuals and suggest that we may be overloading deaf students' visual capabilities even as we try to make classroom communication more accessible.