



laboratory and field legibility distances were very promising. The newly developed laboratory simulation was a successful first step at correcting problems associated with laboratory studies in the past.

Large within-subject variability, evident in both age groups, was found to overshadow the contributions of experimental variables. No studies have reported the finding of such large within-subject variance in similar research.

Identification of this substantial within-subject variability led to an analysis of the variation in distance estimation if different strategies for trials are used. Using only the first, or the minimum, or the first two give very different answers.

It is argued that recommended distances at which signs are placed should be determined from a "worst-case" scenario of the minimum distance with tolerances constructed from the other trials. This premise requires a reexamination of research methodologies for determining guidelines for sign placement, the primary one is the necessity for more trials to account for within-subject variability.