Reviewer's report

**Title:** Vision problems linked to reading difficulties in a cohort of European school children: prismatic correction offers the most effective treatment

**Version:** 1  **Date:** 27 February 2011

**Reviewer:** Janice Wensveen

**Reviewer's report:**

Major Compulsory Revisions:

This study compares the reading speed and error rate, accommodative amplitude, vergence facility, and binocular facility with +/- lenses in children 7-14 yrs with convergence insufficiency and reading difficulties, who either wore 8BI reading glasses or performed computerized home training. The strength of the study is the cohort of subjects (n=134): the children had been referred because of difficulty with reading/writing, had been screened for low intelligence and ocular pathology, but were positive for convergence insufficiency. The weaknesses may prove to outweigh this strength, depending on clarification of 2 critical issues. The statement that “Thirty two subjects refused both types of treatment offered” implies that the subjects in this study were not randomized. This is one fatal flaw. Unless the authors can show statistically that there were no ‘between group’ differences in characteristics including subject’s ages, genders, refractive errors (not between eyes of any given subjects, but (typically) right eyes of subjects between treatment groups), pre-treatment NPC, near exophoria, AC/A, reading speed and error rate, accommodative amplitude, vergence & accommodative facility, there is no value in the study. The other fatal flaw is that because it is not explicitly stated that the examiner was masked as to which treatment group the child was in, it is assumed that he was not masked. When the outcome measures are subjective, as these are, they are open to investigator bias. Other questions regarding the logic behind using 8BI regardless of the near phoria, exactly what HTS training was prescribed and performed, and exactly what statistical tests were performed are critical but not fatal. If the authors can address the issues raised, a resubmission to this reviewer would be welcome, but consideration for publication is guarded as it is impossible to fix errors in study design after the study is completed.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:

I declare that I have no competing interests.