This study examined whether story recall of small groups of pupils, respectively in Year 5 and Year 4, was affected by the provision of Cued Animations and Sound Effects (CASE). Each of the two interactive storybooks selected for this study, *Kiyenko and the Lost Night* and *Shiela Rae the Brave*, was analyzed to disclose its story grammar. A story grammar relates the story surface structure, the sentences, to the underlying structure of propositions on which readers form ‘schemata that guide comprehension and control retrieval from memory’. Pupils’ recall of the interactive storybooks was assessed by two measures, collaborative verbal story retelling and short multiple choice quizzes. Half of the groups read in the ‘Let Me Play’ option and the other half read in the ‘Read to Me’ option. Results of the study showed that the story grammar recall of Year 5 and Year 4 pupils who had read an interactive storybook with access to CASE was found to have deteriorated throughout the event structure. Moreover, the data collected by the main study indicates that the story grammar of pupils with access to CASE deteriorated relative to the recall of pupils who had no access to CASE. It was also found that pupils who had read an interactive book with access to CASE performed less well on inferential items relative to their performance on items that measured comprehension as product, that is, items concerning names and micropropositions, when compared with the performance of pupils who had read the interactive book with no access to CASE. The authors asserted that access to CASE provided inconsiderate distractions from the written portion that adversely affected pupils’ comprehension. They recommended that potentially adverse effects of CASE would be ameliorated by the assimilation of interactive storybooks into existing literacy practices. The researchers also suggested that pupils reading an interactive storybook, with or without access to CASE could be provided with authentic interactive reading mediation by adults.

**Keywords:** Interactive storybook; Primary/Elementary education; CD-ROM; Cued Animations and Sound Effects; England.