The study is an analytical review of contemporary eye-tracking researches, which are concerned with the perception of multimedia teaching materials. The main issues of these researches are distinguished as (a) the characteristics of experts’ perception in comparison with the perception of novices or of current students; (b) the transformation of the perceptual process under the condition of learning experiment; (c) the features of helpful visual materials in different domains; (d) the influence of the visual highlighting and of other forms of guiding on learning outcome. The analysis of the results of the eye-tracking researches is conducted from the activity theory point of view that allows to resolve some contradictions and to explain unexpected empirical results.

Keywords: activity theory, perception, eye-tracking, experts, novices, visualization, multimedia learning, information reduction hypothesis

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