

Effects of divergent production style H initiative game activities on fifth-grade students use of critical thinking skills in physical education

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Abstract (Summary)

In an age where technology continues to become increasingly complex the need to learn critical thinking skills is clearly evident. A model of teaching titled the **Spectrum of Teaching Styles** and the use of initiative game activities offer opportunities for children to use problem solving strategies in physical education classes. Although critical thinking is advocated by educators, little research has focused on this dynamic and complex subject.

The purpose of this study was to investigate the effects of teaching initiative game activities on fifth grade students use of critical thinking skills in physical education. Seventy-five ($n = 75$) fifth grade students participated in this study. The New Jersey Test of Reasoning Skills and stimulated recall interview questions were used to measure children's use of critical thinking skills. Three fifth grade classes were randomly assigned to a specific group. The three groups were control (C), experimental one (E1), and experimental two (E2). All groups took the New Jersey Test of Reasoning Skills pre- and post-test. The C group participated in ten 50 minute physical education lessons unrelated to critical thinking and initiative game activities. The E1 group participated in ten 50 minute initiative game lessons. The E2 group participated in ten 50 minute initiative game lessons and also received instruction on critical thinking skills.

The results from a one way ANCOVA on the New Jersey Test of Reasoning Skills indicated that the treatment of initiative game activities with or without instruction in critical thinking was minimal. It was determined that no two groups were significantly different at the .05 level. Data from stimulated recall interview sessions indicated that both E1 and E2 groups were nearly identical in their number of strategy statements. However, the quality of strategy statements was superior for the E2 group. The E1 group provided more rationalization and evaluation statements than the E2 group. The E2 group provided over a dozen thought process statements while the E1 group provided no thought process statements. Data from the stimulated recall interview sessions indicated that children who received critical thinking instruction brainstormed ideas and considered alternative solutions before attempting to solve initiative game activities.