

Konstruksi *Video Supported Critical Thinking Test (VSCT-Test)* dalam Materi Teori Kinetik Gas

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Abstrak

Penelitian ini bertujuan mengonstruksi instrumen tes untuk mengukur keterampilan berpikir kritis peserta didik terkait materi teori kinetik gas yang didukung video, *Video Supported Critical Thinking Test (VSCT-Test)*. Metode penelitian yang digunakan yaitu metode penelitian dan pengembangan (R&D) yang terdiri atas: 1) analisis kebutuhan; 2) pengembangan produk; 3) pengujian lapangan; dan 4) revisi produk. Hasil penelitian berupa produk instrumen *VSCT-Test* terkait materi teori kinetik gas yang memiliki karakteristik soal berbentuk pilihan ganda beralasan yang dikonstruksi berdasarkan domain spesifik berpikir kritis Tiruneh yang dikembangkan dari *framework* berpikir kritis Halpern, stimulus soal bersifat kontekstual didukung dengan ilustrasi dinamis berupa video fenomena dan simulasi yang memperjelas stem soal, serta tampilan soal dikemas menggunakan *google forms*. Hasil pengujian validitas isi dianalisis dengan CVR diperoleh nilai CVR 0,976 valid dan reliabilitas *VSCT-Test* mendapatkan kategori tinggi. Hasil penelitian menunjukkan bahwa *VSCT-Test* yang dikonstruksi dapat membedakan keterampilan berpikir kritis antara peserta didik yang mendapatkan proses pembelajaran yang melatih keterampilan berpikir kritis dengan peserta didik yang mendapatkan proses pembelajaran yang tidak melatih keterampilan berpikir kritis. Disimpulkan bahwa instrumen *VSCT-Test* yang dikonstruksi berfungsi baik dalam mengukur keterampilan berpikir kritis peserta didik.

Kata kunci: *video supported critical thinking test*, keterampilan berpikir kritis, teori kinetik gas

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Video Supported Critical Thinking Test (VSCT-Test) in the Kinetic Theory of Gases

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Abstract

This study is conducted to construct an instrument to measure students' critical thinking skills related to the kinetic theory of gases supported by video, the Video Supported Critical Thinking Test (VSCT-Test). The study used research and development method (R & D) which consists of: 1) needs analysis; 2) product development; 3) field testing; and 4) product revisions. VSCT-Test questions are contextually supported by dynamic illustrations in the form of videos and simulations. The results show VSCT-Test instruments related to the kinetic theory of gas that has the characteristics of reasoned multiple-choice questions that was constructed according to specific domain of critical thinking by Tiruneh developed from Halpern's critical thinking framework., the questions stimulus contain phenomena video and simulations that clarify questions stem as well as the display of questions was designed using google forms. VSCT-Test validity was determined through experts judgement involving content validity, whereas VSCT-Test reliability was concluded through field testing with the test-retest method. The results showed that all of VSCT-Test items that were constructed had met a valid content validity were analyzed by CVR, with value of CVR 0,976 and the VSCT-Test reliability got a high category. The results showed the VSCT-Test that was constructed can distinguish critical thinking skills between students who get a learning process that practice critical thinking skills with students who get a learning process that does not practice critical thinking skills. Thus, this is concluded that the VSCT-Test has good quality and suitable for measuring students' critical thinking skills.

Keywords: *video supported critical thinking test, critical thinking skill, kinetic theory of gases*