

### **Abstrak**

Paper ini mendeskripsikan skenario, spesifikasi agen, peta pengetahuan, implementasi *serious game* berbasis taksonomi Bloom (BoTySeGa), serta tanggapan pengguna terhadap game yang dibangun. Pembangunan BoTySeGa bertujuan menyediakan alternatif alat penilaian yang dibutuhkan dalam penilaian pembelajaran di SD. Pembangunan mempertimbangkan aspek: pengetahuan permainan, materi bangun datar jajaran genjang siswa SD kelas 5, dan domain kognitif menurut Bloom. Level tantangan disusun mengikuti aspek domain kognitif Bloom yang diaplikasikan di jenjang SD (pengetahuan, pemahaman dan aplikasi). Game yang dihasilkan diuji melalui uji penerimaan pengguna (UAT) untuk meyakini semua fungsi dan fitur berfungsi dengan benar. Uji juga mencakup tanggapan pengguna yang dilakukan menggunakan kuesioner skala Likert dengan lima pilihan dan lima belas item pertanyaan. Uji dengan melibatkan 85 pengguna diperoleh hasil bahwa BoTySeGa memenuhi spesifikasi kebutuhan penilaian pembelajaran. Dengan rentangan skor tanggapan 5 – 75; rata-rata skor tanggapan dari pengguna sebesar 59,93 dan berada dalam kategori tanggapan "Positif".

*Kata kunci:* Penilaian Pembelajaran, Taksonomi Bloom, Permainan Serious.

### **Abstract**

*This paper describes: a scenario, agent specification, mapping of knowledge domain, an implementation of Bloom's taxonomy-based serious game (BoTySeGa), and players' response against the game. The development of BoTySeGa is pursued to the availability of an alternative assessment tool for learning in elementary school. It considers aspects: game knowledge, subject matter of parallelogram for 5<sup>th</sup> grade elementary school learners, and cognitive domain of Bloom's taxonomy. BoTySeGa's level of challenge is structured accommodates cognitive domain of Bloom for elementary school learners (knowledge, comprehension, application). To make sure that all functions and features work well; we conducted user acceptance test against the game prototype. We also took players' response to BoTySeGa utilizing five-points Likert-type of questionnaire. The questions are distributed in 15 items. User acceptance testing involving 85 learners of 5<sup>th</sup> grade elementary school shows that BoTySeGa has fulfilled the learning assessment requirement. With the response score ranged from 5 to 75; it is found that the average score of players' response to the implementation of BoTySeGa in learning is 59.93. This response value falls within "Positive" category.*

*Key words:* Learning Assessment, Bloom's Taxonomy, Serious Game.