

ABSTRAK

Penelitian ini merumuskan model theory-driven pengembangan Game-Based Assessment untuk mengukur conscientiousness melalui tiga studi: meta-analisis, pengembangan prototipe, dan evaluasi empiris. Studi pertama memberikan bukti bahwa GBA memiliki potensi signifikan sebagai metode pengukuran aspek kepribadian. Meta-analisis terhadap penelitian sebelumnya menunjukkan validitas konvergen yang moderat dan signifikan antara GBA dan alat ukur self-report ($r = 0,516$; $p < 0,001$). Studi kedua memperluas pemahaman tentang bagaimana atribut ukur psikologis dapat dioperasionalkan ke dalam desain permainan melalui integrasi design thinking dan kerangka DPE. Hasil penelitian menunjukkan design thinking dan kerangka DPE membantu proses pengembangan GBA menjadi lebih terstruktur dan tersistematis serta memiliki landasan konsep pengukuran yang jelas. Studi ketiga memberikan bukti empiris bahwa prototipe GBA menghasilkan korelasi positif dengan skor conscientiousness ($r = 0,350$; $p < 0,001$). Analisis IRT mengidentifikasi beberapa item dengan daya diskriminasi baik, meskipun beberapa item lain membutuhkan perbaikan. Wawancara kognitif menguatkan bahwa skenario awal permainan lebih konsisten memunculkan perilaku conscientiousness dibanding skenario lanjutan yang terpengaruh kompleksitas visual sehingga membutuhkan revisi lebih lanjut. Secara keseluruhan, temuan dari ketiga studi menghasilkan model theory-driven yang mengintegrasikan teori kepribadian, desain permainan, dan prinsip psikometrika modern untuk mendukung pengembangan GBA yang lebih terstandar, valid secara konstruk, dan dapat direplikasi.

Kata kunci : Game-Based Assessment, properti psikometris, conscientiousness

ABSTRACT

This research proposes a theory-driven model for developing GBA to measure conscientiousness through three sequential studies: a meta-analysis, prototype development, and empirical evaluation. The first study provides quantitative evidence that GBAs hold substantial potential as tools for assessing personality constructs. A meta-analysis of prior GBA research demonstrated a moderate significant convergent validity coefficient with self-report measures ($r = .516$, $p < .001$). The second study extends the understanding of how psychological attributes can be operationalized within game design by integrating design thinking and the DPE framework. Findings indicate that combining design thinking with the DPE framework supports a more structured and systematic GBA development process with a clearer conceptual foundation for measurement. The third study provides empirical evidence that the GBA prototype yields a positive correlation with conscientiousness scores ($r = .350$, $p < .001$). IRT analyses identified several items with good discrimination parameters, although others require refinement. Cognitive interview further revealed that early-stage scenarios consistently elicited conscientiousness-related behaviors, whereas later scenarios were more affected by visual complexity and situational noise, highlighting areas for revision. The three studies culminate in a theory-driven model that integrates personality theory, game design principles, and modern psychometric methods. This model offers a structured, conceptually grounded, and replicable approach to developing GBAs that demonstrate stronger construct validity and enhanced measurement coherence.

Keywords : Game-Based Assessment, psychometric property, conscientiousness