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Título do Artigo

Análise da consistência interna do teste de resolução de problemas matemáticos para alunos da 3ª classe do ensino básico

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Resumo

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O objectivo fundamental desta pesquisa é analisar a consistência interna dos itens do teste de resolução de problemas matemáticos em alunos da 3ª classe do Ensino Básico. O teste elaborado pelos pesquisadores visava avaliar as competências dos alunos em calculo e geometria. O mesmo foi aplicado em uma amostra constituída por mil e oitenta e oito alunos (1088) que frequentaram a 3ª classe em nove escolas dos distritos de Mapai, Chokwe, Xai-Xai, Macia, Mandlakazi e Chibuto. A metodologia usada para analisar a consistência interna dos itens do teste foi a determinação do coeficiente alfa (α) de Cronbach que varia de 0 a 1. Enquanto que, um teste com um coeficiente alfa superior a 0,7 (α>0.7) é considerado aceitável um teste com α>0.8 ou α>0.9 é considerado bom ou excelente respectivamente, isto é os itens do teste são consistentes para a mensuração do constructo em questão. Os resultados deste estudo mostram que o teste aplicado atingiu um α>0.7 porém <0.8 ou <0.9 o que se pode considerar que embora a consistência dos itens do mesmo o teste não tenha atingido os níveis de bom ou excelente a sua consistência é aceitável e pode ser usado para avaliar as competências dos alunos para a resolução de problemas matemáticos. Palavras chave, Consistência interna, resolução de problemas, competências dos alunos. Abstract This investigation sought to analyze if the internal consistence of the items of the test of the basic mathematics operations and problem-solving to understand if 3rd grade students' performance in basic mathematics operations predicts the performance in problem-solving in math. The math task included questions of numerical comparison, equations and operations, and geometry. Mathematical and problem-solving tasks were applied to 1088 Mozambican students. In the fooling districts schools of Mapai, Chokwe, Xai-Xai,

Macia, Mandlakazi and Chibuto. The used methodology to analyze the internal consistence of the items of the test was through (α) Cronbach Alfa coefficient determination which vary from 0 to 1. While that, a test with a Alfa coefficient superior to 0,7 (α>0.7) is considered acceptable one test with α>0.8 or α>0.9 is considered good or excellent respectively this is to say that the items of the refereed test are quit consistent to measure the questioned construct. The results of the test shows that the applied test reached α>0.7 however <0.8 or <0.9 what can be considered that moreover the consistence of the same test items didn't reach good or excellent level their consistence is acceptable and can be used to evaluate students competence for math problems solving. Key words: Internal Consistence; problem solving; students competences.

Palavras-chave (3 a 5)

Palavras chave, Consistência interna, resolução de problemas, competências dos alunos.

Abstract

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The main objective of this research is to analyze the internal consistency of the items of the test of solving mathematical problems in students of the 3rd class of Basic Education. The test developed by the researchers was aimed at evaluating students' skills in calculus and geometry. The same was applied in a sample consisting of one thousand and eighty-eight students (1088) who attended the 3rd class in nine schools in the districts of Mapai, Chokwe, Xai-Xai, Macia, Mandlakazi and Chibuto. The methodology used to analyze the internal consistency of test items was the determination of Cronbach's alpha (α) coefficient ranging from 0 to 1. While a test with an alpha coefficient greater than 0.7 (α> 0.7) is considered acceptable a test with α> 0.8 or α> 0.9 is considered good or excellent respectively, ie the items of the test are consistent for the measurement of the construct in question. The results of this study show that the applied test reached an α> 0.7 but <0.8 or <0.9 which can be considered that although the consistency of the items of the same test did not reach the good or excellent levels its consistency is acceptable and can be used to assess students' skills in solving mathematical problems. Keywords, Internal consistency, problem solving, students' competences.

Key-words (3 to 5)

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