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# Penilaian Tahap Kesukaran Item Ujian Akhir Sesi Akademik (UASA) Matematik Tingkatan 1

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## Abstrak

Kajian ini bertujuan menganalisis item Ujian Akhir Sesi Akademik matapelajaran Matematik di kalangan murid tingkatan 1 di sebuah sekolah terpilih di Negeri Selangor. Kajian terhadap analisis item soalan Matematik menggunakan model Rasch adalah terhad. Analisis item ini melibatkan ujian bertulis kertas penilaian akhir sesi pengajian 2022 melalui penglibatan 71 orang pelajar. Analisis deskriptif model Rasch daripada perisian Winstep 3.71.0.1 digunakan bagi menilai statistik item melalui analisis unidimensi ujian, kesesuaian item, polariti item, dan analisis tahap kesukaran item yang dilibatkan sebagai ujian akhir. Analisis ini bertujuan bagi mengesahkan kualiti item penilaian yang dilibatkan dari sudut statistik sekali gus mengesan kesesuaian item tersebut untuk digunakan atau diubahsuai berdasarkan standard kandungan sekali gus mencapai hasil pembelajaran yang ditetapkan. Dapatan menunjukkan sebahagian besar item adalah memenuhi keperluan pengukuran model Rasch. Item-item adalah sesuai digunakan semula sebagai item ujian. Nisbah kesukaran item kurang bersesuaian dengan konstruk pembelajaran. Melalui dapatan yang diperoleh diharapkan dapat membantu pengkaji meningkatkan kualiti pentaksiran dan penilaian matematik di sekolah.

Kata Kunci: Item; Matematik; Penilaian; Rasch; Tahap Kesukaran

## Abstract

This study aims to analyse the items of the final academic session of the mathematics subject among form one students in a selected school in the State of Selangor. Research on the analysis of Mathematics question items using the Rasch model is limited. Item analysis involves a set of multiple-choice question test of the final assessment paper of the 2022 study session through the involvement of 71 students. Descriptive analysis of the Rasch model from the Winstep 3.71.0.1 software was used to evaluate item statistics through unidimensional analysis of the test, item fit, item polarity, and analysis of the difficulty level of the items. This analysis aims to verify the quality of the evaluation items involved from a statistical point of view, thus detecting the suitability of the item to be used or modified based on the content standard, thus achieving the set learning outcomes. Findings show that most of the items meet the measurement requirements of the Rasch model. The items are suitable for re-use as test items. The difficulty ratio of the items is less compatible with the learning construct. Through the findings, it is hoped that researchers can improve the quality of mathematics assessment and evaluation in schools.

**Keywords:** Assessment; Difficulty Level; Item; Mathematics; Rasch

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