

Evaluation of MTA Learning Achievement based on Rule-space Model and Relevance Feedback with e-Learning

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Received 16 September 2011; Revised 12 January 2012; Accepted 10 February 2012

Abstract. The more professional licenses, the more jobs that students can easily get in Taiwan. It is very important to promote professional certification for students in vocational education systems. In this paper, we utilized the rule-space model to diagnose the cognitive skills for assessment evaluation and also considered the user's relevance feedback to improve the learner's learning achievement in the MTA (Microsoft Technology Associate) course. The Rule-Space Model approach supports cognitive analysis of a student's network technologies skill, and allows comprehension which learning topics are weaknesses or strengths per individual. The learner's relevance feedback provided user's evaluation that contained the item difficulty. We implemented a web testing application for MTA testing simulation. In our experiences, this approach can provide an understanding of the learning characteristic for e-learning achievement, and to explore a better educational application. The learner can fit Self-Regulation processing of the Scaffolding Theory and achieve social learning effectiveness simultaneously. Therefore, we use the MTA licenses online testing system to guide and assist students for obtaining licenses that have very good progress rate and obtain rate.

Keywords: rule-space model, relevance feedback, scaffolding theory, reliability, validity

Acknowledgement

This work was supported by the National Science Council, R.O.C., under Grant NSC 100-2511-S-262 -002 -.

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