

## INTISARI

Studi ini bertujuan untuk mewujudkan perencanaan strategis berupa *blueprint* sistem analisis dan desain *the new computerized adaptive testing (CAT)* untuk Universitas Terbuka. Selanjutnya, *the new CAT* tersebut untuk meningkatkan tingkat kompetensi dan kapabilitas mahasiswa Universitas Terbuka dengan lebih akurat dan secara keseluruhan. Penelitian ini menggunakan *disruptive innovation theory*, *need of achievement theory*, dan *adaptive structuration theory* sebagai dasar perancangan *the new CAT*. Pada penelitian ini, penulis menggunakan jenis penelitian *research and development (RnD)*. Penulis melakukan analisis terhadap prosedur pembuatan soal dan pelaksanaan ujian di Universitas Terbuka. Selanjutnya, penulis merancang rekomendasi desain *the new CAT* dalam bentuk *logical design* untuk desain *output*, *input*, *database*, dan proses. Hasil penelitian ini menunjukkan bahwa masih terdapat beberapa kelemahan pada prosedur pembuatan soal dan pelaksanaan ujian di Universitas Terbuka. Selain itu, Universitas Terbuka memiliki jumlah unit program belajar jarak jauh (UPBJJ) dan mahasiswa Universitas Terbuka yang cukup banyak. Hal ini membuat Universitas Terbuka membutuhkan *the new CAT* untuk mendukung kecepatan dalam prosedur pembuatan soal, pelaksanaan ujian secara *online*, dan pengevaluasian hasil belajar mahasiswa. Hasil evaluasi yang akurat dapat membantu Universitas Terbuka untuk meningkatkan tingkat kompetensi dan kapabilitas mahasiswanya.

*Kata Kunci:* Perancangan sistem, *computerized adaptive testing*, *disruptive innovation theory*, *need of achievement theory*, *adaptive structuration theory*, *research and development*

## **ABSTRACT**

This study aims to realize a strategic planning in the form of a blueprint of the analysis system and a design of new computerized adaptive testing (CAT) for Open University. Furthermore, the new CAT is intended to improve the level of competence and the capability of Open University students to be more accurate and thorough. This study employed the disruptive innovation theory, needs of achievement theory, and the adaptive structuration theory as the bases in designing the new CAT. The type of this research was research and development (RnD). The writer analyzed the procedure in developing test questions and looked at the test administration at Open University. The writer designed a new CAT in the form of logical design for the output, input, database, and process. The results of this study indicate that there are some weaknesses in the procedure in developing test questions and test administration at Open University. In addition, Open University has a large number of units of distance learning program (UPBJJ) and students. Consequently, Open University needs a new CAT to support the speed of the development of the test questions, the implementation of the online examinations, and the student learning outcome evaluation. Accurate evaluation results can help Open University to improve the level of competence and capability of the students.

*Keywords: system design, computerized adaptive testing, disruptive innovation theory, need of achievement theory, adaptive structuration theory, research and development*