

## ABSTRAK

### **PENERAPAN ALGORITMA FISHER-YATES PADA COMPUTER BASED TEST DI PANDA MANDARIN COURSE**

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Panda Mandarin *Course* merupakan tempat kursus belajar Bahasa Mandarin yang memiliki 3 tingkatan kelas, yaitu *Elementary 1*, *Elementary 2*, dan *Elementary 3* dimana setiap kelas memiliki tingkat kesulitan yang berbeda-beda. Pada saat ini sistem ujian yang diterapkan di Panda Mandarin *Course* adalah ujian secara konvensional. Namun ujian secara konvensional memiliki beberapa kekurangan, yaitu guru harus membuat soal setiap kali ujian dilaksanakan, membutuhkan banyak kertas, dan guru harus memeriksa ujian terlebih dahulu untuk mengetahui hasil yang di dapat setiap murid. Untuk mengatasi hal tersebut, dibangun sebuah sistem yang dapat mempermudah jalannya ujian. Sistem ini disebut *Computer Based Test*. Dengan adanya *Computer Based Test*, maka ujian dapat dijalankan dengan komputer, sistem juga dapat menilai hasil ujian secara langsung setelah murid menyelesaikan ujian. Sistem ini juga diimplementasikan dengan algoritma *Fisher-Yates* agar setiap soal dan jawaban yang diterima oleh murid dapat teracak. Hal ini dilakukan untuk mengurangi tindakan kecurangan yang dilakukan oleh murid. Setelah sistem dianalisis, terjadi kemunculan soal yang sama sebanyak 44% dan terjadi kemunculan soal yang sama pada nomor urut yang sama sebanyak 14% yang mengindikasikan kemungkinan terjadinya kemunculan soal yang sama di waktu yang bersamaan pada 2 orang murid sangatlah kecil. Juga diketahui rata-rata kemunculan soal adalah sebesar 3,33%.

**Kata Kunci :** *Computer Based Test, Fisher-Yates*

## **ABSTRACT**

### **THE APPLICATION OF FISHER-YATES ALGORITHM ON COMPUTER BASED TEST AT PANDA MANDARIN COURSE**

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Panda Mandarin Course is a place for learning Chinese language that has 3 grade levels, namely Elementary 1, Elementary 2, and Elementary 3 where each class has a different level of difficulty. At this time the exam system applied in the Panda Mandarin Course is a conventional exam. However, conventional exams have several drawbacks, namely the teacher has to make questions every time the exam is carried out, requires a lot of paper, and the teacher has to check the exam first to find out the results that each student can get. To overcome this, a system was built that could facilitate the examination. This system was called Computer Based Test. With the Computer Based Test, the exam was run on a computer, the system could also assess the exam results directly after students completed the exam. This system was also implemented with the Fisher-Yates algorithm so that every question and answer received by students was randomized. This was done to reduce the acts of cheating committed by the students. After the system was analyzed, 44% of the same questions appeared and 14% of the same questions appeared on the same serial number, which indicated the possibility of the same questions appearing at the same time in 2 students was very small. It was also known that the average occurrence of questions was 3,33%.

**Keywords:** Computer Based Test, Fisher-Yates