ABSTRAK

Tujuan dari penulisan ini adalah untuk mengetahui (1) desain pembelajaran (termasuk: isi materi, urutan pembelajaran dan metode penyampaian materi) dari *software "Mind Power: Teach Yourself Calculus"*, (2) Kesesuaian antara *software* dan pembelajaran kalkulus di SMU, (3) penyusunan program pembelajaran kalkulus dengan bantuan *software" Mind Power: Teach Yourself Calculus"* untuk mendukung pembelajaran berbasis kompetensi dan (4) Hasil ujicoba dari program pembelajaran kalkulus terhadap keterlibatan, minat dan prestasi belajar siswa.

Metode yang digunakan pada penulisan ini adalah metode deskriptif dokumenter dengan studi kasus terhadap 5 siswa. Metode analisis dokumenter digunakan untuk memperoleh desain pembelajaran dari *software" Mind Power: Teach Yourself Calculus"*. Instrumen yang digunakan adalah lembar pengamatan, kuesioner dan lembar evaluasi. Data keterlibatan diperoleh dari hasil observasi dan data minat diperoleh dari kuesioner yang sudah diisi siswa setelah pembelajaran.

Dan data prestasi diperoleh dari lembar evaluasi yang dikerjakan siswa.

Ujicoba dilaksanakan pada tanggal 3 Juni 2004 dengan mengambil sampel sebanyak 5 siswa dari kelas 2 SMUN I Paguyangan Brebes. Hasil dari ujicoba ini mengindikasikan bahwa keterlibatan siswa selama pembelajaran cukup baik terlihat dari kegiatan siswa dalam mengeksplorasi *software*, bertanya dan menjawab pertanyaan dalam setiap kegiatan mandiri.

Siswa berminat (60%) dan sangat berminat (40%) pada pembelajaran matematika dengan *software "Mind Power: Teach Yourself Calculus"*.

Secara umum siswa menunjukkan penerimaan/ketercapaian kompetensi setelah pembelajaran dengan desain pembelajaran kalkulus dengan *software" Mind Power: Teach Yourself Calculus"*.

ABSTRACT

The aims of the writing of this thesis are to know (1) the design of the learning process (including the learning materials, the learning order, and the methods for presenting the learning materials) that is used in the software *"Mind Power: Teach Yourself Calculus"*; (2) the conformity between the software and the calculus learning in SMU (Indonesian Senior High Schools); (3) the constructions of a calculus learning program assisted by the software *"Mind Power: Teach Yourself Calculus"* to support the competency based learning; and (4) The result of a trial of that calculus learning program in terms of students' involvement, learning interest and learning achievement.

The method used in the writing process are documentary-descriptive and a case study conducted for 5 students. The documentary analysis is used for discovering the design of the learning process used in the software *"Mind Power: Teach Yourself Calculus"*. The instruments used are an observation sheet, a questionnaire, and an evaluation sheet. The data of students' involvement are obtained from observations and data of students' interesting are obtained from the questionnaire administered to the students as a follow up to the learning process.. The data of students' achievement are obtained from the evaluation sheet (a test) administered to the students.

The trial was conducted on June 3rd 2004 using 5 students of the second form of SMU N I Paguyangan, Brebes. The result of this trial indicated that students' involvement in learning the program was good enough, as seen from their activities in exploring the software and asking questions during the learning process. The students were interested (60%) and very interested (40%) in learning the program which was constructed in conformity to the software *"Mind Power: Teach Yourself Calculus"*.

In general the students indicated that they reached (achieved) the desired competencies after learning calculus using the program which was constructed in conformity to the software *"Mind Power: Teach Yourself Calculus"*.