

EFFECTIVENESS OF COMPUTER-ASSISTED INSTRUCTION
IN LEARNING GEOGRAPHY AMONG MALAYSIAN
FORM FOUR STUDENTS

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ABSTRAK

KEBERKESANAN KAEDAH PEMBELAJARAN BERBANTUAN KOMPUTER (CAI) DALAM GEOGRAFI DI KALANGAN PELAJAR-PELAJAR TINGKATAN 4 DI MALAYSIA

Kaedah CAI semakin popular pada masa kini. Seperti yang diperkatakan oleh kebanyakan penyelidik CAI, bahan-bahan untuk menyampaikan isi pelajaran kepada pelajar dalam Kaedah CAI kebanyakannya berbentuk bahan-bahan Multimedia Interaktif (IMI). Kebanyakan program dan bahan pembelajaran yang diperoleh dari Internet atau yang sedia ada dalam bentuk CD-Rom adalah juga dalam bentuk IMI.

Apakah keberkesanannya IMI sebagai satu alat pembelajaran ? Soalan ini merupakan fokus utama kajian ini. Kajian ini juga mengkaji faktor pengaruh jantina ke atas pencapaian akademik dan persepsi pelajar terhadap CAI. Ia mengguji satu Program IMI yang direka khas oleh penyelidik ini untuk satu topik Geografi Tingkatan 4 yang dipilih.

Kajian ini melibat 60 orang pelajar daripada sebuah sekolah menengah di Temerloh, Pahang. 30 daripadanya menjadi subjek sampel untuk Kumpulan CAI sementara bakinya menyertai Kumpulan Bukan-CAI. Kumpulan CAI akan belajar melalui komputer sementara kumpulan satu lagi akan diajari dengan Kaedah Pengajaran dalam Bilik Darjah. Sebelum sessi CAI dan sessi Kaedah Lama, semua pelajar menduduki Ujian Pra-CAI. Kumpulan CAI juga menjawab Borang Soal-selidik Persepsi CAI. Selepas eksperimen CAI, semua subjek sampel menduduki Ujian Post-CAI untuk mengukur Peningkatan Skor (Gain). Kumpulan CAI pula menjawab Borang Soal-selidik sekali lagi untuk menilai sebarang perubahan persepsi mereka terhadap penggunaan komputer.

Keputusan kajian ini ialah tiada perbezaan signifikan dalam Peningkatan Skor CAI berbanding dengan skor Kumpulan Bukan-CAI di paras signifikan $p < .05$. Kajian ini juga mendapat bahawa Kaedah CAI sama-sama berkesan berbanding dengan Kaedah Pengajaran di bilik darjah. Para lelaki juga tidak menunjukkan perbezaan signifikan berbanding dengan para perempuan dalam aspek perbandingan pencapaian Peningkatan Skor. Para lelaki dan para perempuan didapati mempunyai persepsi sama yang positif terhadap CAI. Hanya satu keputusan yang signifikan iaitu dalam keseluruhannya, persepsi pelajar terhadap penggunaan komputer dalam pembelajaran telah bertambah.

Kajian ini mencadangkan bahawa kajian-kajian akan datang menggunakan saiz sampel kajian yang lebih besar supaya keputusan kajian memperoleh kesignifikantan. Saiz sampel dalam kajian ini didapati terlalu kecil ($n = 30$). Implikasi kajian ialah para ibubapa dan juga pihak Kementerian Pendidikan patut membekalkan komputer (PC) kepada anak-anak dan para pelajar kerana dapatkan persepsi positif pelajar terhadap komputer. Walau bagaimanapun, disarankan bahawa lebih banyak kajian mengenai keberkesanannya CAI terhadap pencapaian akademik dijalankan memandangkan kos tinggi yang dibelanjakan untuk pelaksanaan Sekolah-sekolah Bestari.

ABSTRACT

EFFECTIVENESS OF COMPUTER-ASSISTED INSTRUCTION IN LEARNING GEOGRAPHY AMONG MALAYSIAN FORM FOUR STUDENTS

Computer-Assisted Instruction (CAI) has become increasingly popular nowadays. As mentioned by many well-known CAI researchers, the CAI method uses mainly Interactive Multimedia Instruction (IMI) program via computers to impart knowledge to the students. Many programs and learning materials from Internet or those available on CD-ROMs are IMI materials.

How effective is the IMI program as a learning tool ? It is the main focus of this study. This study also investigated the factor of gender in influencing achievement and students' perception towards CAI. The study was on an IMI program created by the researcher on a Form Four Geography topic.

It involved 60 students from a secondary school in Temerloh, Pahang. 30 will be the sample subjects for the CAI Group while the remaining will be in the Non-CAI Group. The CAI Group will learn using computers while the other group will be taught using traditional classroom method. Before the CAI sessions and the classroom treatment, students took a Pre-CAI Test. The CAI Group also answered a Questionnaire on students' perception towards CAI. After the experiment, all the subjects sat for the Post-CAI Test to measure the Gain. The CAI Group answered the Questionnaire again to assess changes in perception towards CAI.

The result is there was no significant difference between the CAI Gain and the Non-CAI Gain at level $p < .05$. This study revealed that CAI method was just as effective as the classroom teaching method. Boys also did not show significant difference compared to girls in term of achievement Gain scores. Boys and girls perceived CAI method as much as each other did. The only significant result was that there was an increase in students' perception towards the use of computers in learning at $p < .05$.

The findings suggest that future researches should employ bigger samples in order to obtain significant findings. The present samples in the study were considered too small ($n = 30$). The implication was that parents and the Ministry of Education should equip PCs for their kids or students because of positive perception towards computers. However, it is recommended that more studies be conducted to assess the effectiveness of CAI on achievement in view of the costly implementation of the scheduled Smart Schools in 1999.

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