

Abstract

This study highlights the problems faced by students in the learning of Science in English as well as the problems faced by teachers in teaching Science using the English language. This study also looked into the learning strategies that students apply in learning Science and teaching strategies that teachers employ in teaching Science using English language. Teachers and students responses towards teaching and learning Science in English will also be looked into. For the purpose of this study, a total of 245 Form Three students from a selected urban school : Sekolah Menengah Kebangsaan Bukit Jelutong in Shah Alam has been taken as a sample study. Data for this study was collected using questionnaires. Different sets of questionnaire was prepared for teachers and students as to elicit response pertaining to problems in teaching and learning Science in English. Besides that, teaching and learning strategies used by teachers and students in the teaching and learning Science and feedback towards teaching and learning Science in English will also be analysed from the questionnaires. A structured interview was conducted by the researcher with a total number of 28 students from seven form three classes and four Science teachers teaching Science for Form Three. In order to triangulate the data, the researcher also carried out a classroom observation on three Form Three classes. For data analyses, this study applies a mixed method of qualitative and quantitative. The qualitative data gathered from the findings from the 245 students' open-ended questionnaire and the four Science teachers' open-ended questionnaire will be analyzed in a qualitative and quantitative form by categorizing the answers in frequency counts and percentages. The responses from the 28 students and 4 Science teachers' interviews were transcribed in a research report and analysed in a written report by the researcher. The observation carried out in the selected form three

classes will also be transcribed in written report. From the study, it was derived that the majority of students claimed that understanding scientific concepts and meanings in English language and writing sentence in English to explain a Science concept as most difficult aspect of learning Science in English. The teachers' problems were more of explaining concepts in English to students as students ability in English language and understanding a concept taught using English is different. This study also suggests that a comprehensive and effective Teaching and Learning Strategy which is the Cognitive and Academic Language Learning Approach – CALLA Approach will help in the teaching and learning of content and language which suits different level of ability among students. Finally from this study, 69.8% of students agreed towards the learning of Science in English for future higher education whereas as far as teachers are concerned, 75% of the teachers agreed towards teaching Science in English as it helps in countries future development in Science and Technology.

Abstrak

Kajian ini memfokuskan masalah yang dihadapi oleh pelajar dan guru dari aspek pembelajaran and pengajaran Sains menggunakan Bahasa Inggeris. Kajian ini juga menganalisa Strategi pembelajaran yang digunakan oleh pelajar dalam pembelajaran Sains menggunakan Bahasa Inggeris serta Strategi Pengajaran yang diaplikasikan oleh guru dalam pengajaran Sains menggunakan Bahasa Inggeris. Respon guru-guru Sains serta para pelajar terhadap pengajaran dan pembelajaran Sains dalam Bahasa Inggeris akan turut dianalisa dalam kajian ini. Bagi tujuan tersebut, seramai 245 pelajar Tingkatan Tiga dari sebuah sekolah terpilih di kawasan bandar, iaitu Sekolah Menengah Kebangsaan Bukit Jelutong, Shah Alam telah diambil sebagai sampel kajian. Data untuk kajian ini telah diperolehi menggunakan borang kaji selidik. Borang kaji selidik yang berlainan telah disediakan untuk guru dan pelajar bagi tujuan mendapatkan respon berkaitan masalah pengajaran dan pembelajaran Sains dalam Bahasa Inggeris, Strategi Pengajaran dan Pembelajaran yang digunakan oleh guru dan pelajar dalam mengikuti Sains dalam Bahasa Inggeris serta maklumbalas / respon terhadap pengajaran dan pembelajaran Sains dalam Bahasa Inggeris. Temuduga berstruktur juga telah dijalankan oleh pengkaji dengan 28 pelajar daripada keseluruhan tujuh kelas tingkatan tiga serta empat guru Sains yang mengajar Tingkatan Tiga di sekolah tersebut. Bagi tujuan keberkesanan kajian, kaedah pemerhatian turut dilaksanakan demi keutuhan dan kesahaan kajian di tiga kelas tingkatan tiga. Bagi tujuan data analisa, kajian ini mengaplikasikan gabungan kaedah kualitatif dan kuantitatif. Data kualitatif yang diperolehi dari borang soal-selidik 245 pelajar serta empat guru Sains akan dianalisa dalam bentuk kualitatif dan kuantitatif dengan mengkategorikan keputusan dalam

bentuk frekuensi dan peratus. Respons dari temuduga 28 pelajar serta empat guru Sains akan dianalisa dan dibuat laporan bertulis. Hasil pemerhatian yang dijalankan di tiga kelas terpilih di tingkatan tiga akan turut dibuat laporan bertulis. Dari kajian ini didapati majoriti pelajar mengaku bahawa memahami konsep dan maksud saintifik serta mengolah ayat bagi menerangkan konsep Sains merupakan masalah utama dari aspek pembelajaran Sains menggunakan Bahasa Inggeris. Masalah ketara yang dihadapi oleh guru adalah dari aspek menerangkan konsep dalam Bahasa Inggeris kepada pelajar yang mempunyai tahap penguasaan dan pemahaman yang berlainan. Kajian ini juga mensyorkan bahawa Strategi Pengajaran dan Pembelajaran yang komprehensif serta efektif iaitu Strategi Pembelajaran Kognitif dan Akademik (CALLA Approach) dapat membantu dalam pengajaran dan pembelajaran kandungan Sains serta Bahasa Inggeris yang dapat memenuhi tahap pemahaman pelajar yang berlainan. Akhir sekali hasil kajian ini juga menunjukkan bahawa 69.8% pelajar bersetuju dengan pembelajaran Sains dalam Bahasa Inggeris demi menjamin pendidikan di masa hadapan manakala 75% guru bersetuju dengan pengajaran Sains dalam Bahasa Inggeris demi pembangunan negara dalam bidang Sains dan Teknologi.

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