Jurnal Pendidikan 32 (2007) 39-60

Sikap terhadap Sains dan Sikap Saintifik di kalangan Pelajar Sains (Attitude on Science and Scientific Attitudes among Science Student)

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ABSTRAK

Kajian mengenai sikap pelajar terhadap sains mungkin dapat mempamerkan penjelasan berkaitan masalah pelajar yang sering mengasingkan diri daripada penglibatan dalam subjek sains. Kajian ini bertujuan untuk melihat sejauh mana sikap terhadap sains dan sikap saintifik di kalangan pelajar berdasarkan tahap pendidikan mereka. Kajian juga bertujuan untuk melihat perkaitan di antara sikap terhadap sains dan sikap saintifik. Seramai 493 pelajar dari Tingkatan 2, 4 dan Matrikulasi telah menjawab soal selidik mengenai sikap terhadap sains dan sikap saintifik. Soal selidik mengenai sikap terhadap sains yang terdiri daripada 48 item adalah bersifat multi-dimensi (iaitu persepsi terhadap guru sains, kepentingan sains dalam masyarakat, konsep kendiri dalam sains, keseronokan dalam sains dan motivasi dalam sains) manakala soal selidik sikap saintifik yang terdiri daripada 23 item mengukur pemikiran kritikal, penangguhan pengadilan, persandaran kepada bukti, kejujuran, keobjektifan dan kesediaan untuk menukar pandangan. Dapatan kajian menunjukkan dimensi sikap pelajar terhadap konsep kendiri dalam sains dan motivasi dalam sains perlu diberi lebih perhatian jika dibandingkan dengan dimensi sikap yang lain. Kedua-dua dimensi ini juga merupakan peramal kepada penglibatan pelajar dalam bidang sains seterusnya di peringkat tahap pendidikan tinggi mahupun dalam kehidupan seharian sebagai ahli masyarakat. Sikap saintifik pelajar mengikut tahap pendidikan adalah rendah. Keadaan ini membawa implikasi kepada keperluan mengubah corak pengajaran dan pembelajaran sains yang lebih bersifat inkuiri dan 'hands-on'. Akhir sekali, wujudnya perkaitan positif tapi lemah di antara saintifik dan sikap terhadap sains di kalangan pelajar Tingkatan 2 dan Matrikulasi.

ABSTRACT

Attitude research might have something to offer in providing possible explanation for the persisting problem of the alienation of students from science. This study aims to determine the level of students' attitudes towards science and of their scientific attitudes and the differentiation according to gender, ethnicity and educational levels. It also aims to investigate the relationship between students' attitudes towards science and scientific attitudes. A total of 493 Forms 2, 4 and matriculation students responded to questionnaires on attitudes towards science and scientific attitudes. The questionnaire on attitudes towards science consists of 48 items and multi-dimensional in nature (Perception towards science teachers, anxiety towards science, value of science in society, self concept in science, enjoyment in science and motivation in science). The questionnaire on scientific attitudes consists of 23 items measuring critical

mindedness, suspended judgment, respect for evidence, honesty, objectivity and willingness to change opinions. The findings indicated that students' self concept in science and motivation in science require further attention compared to the other dimensions of attitudes toward science. Both dimensions are predictors to students' involvement in science at higher educational level and in the society in the future. The level of students' scientific attitudes between gender, ethnicity and across educational levels is found to be low. This finding has an implication on the way science should be taught and learned in that it should be more inquiry and 'hands-on' based. Lastly, there axist weak relationship between students' attitudes towards science and scientific attitudes among the Form 2 and matriculation students.

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