

ALTERNATIVE FRAMEWORKS OF ENERGY OF FORM FOUR STUDENTS

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Kerangka Alternatif Tenaga Bagi Pelajar Tingkatan Empat

Abstrak

Penyelidikan ini bertujuan untuk mengkaji kerangka alternatif terhadap tenaga bagi 33 orang pelajar perempuan dari sebuah sekolah di Kuala Lumpur, serta membandingkan kerangka alternatif mereka dengan kerangka alternatif pelajar yang diperolehi dari penyelidikan lain. Subjek yang digunakan terdiri daripada pelajar yang menyertai penyelidikan ini secara sukarela. Berdasarkan enam keadaan dan tiga peristiwa yang digunakan, kaedah IAI/E telah digunakan untuk mengumpul data. Kerangka alternatif pelajar dikenalpasti dari analisis respon pelajar dalam setiap keadaan dan peristiwa. Hasil kajian menunjukkan :

- (i) pelajar menunjukkan enam jenis kerangka alternatif, iaitu, Kerangka Berpusatan Manusia, Depositori, Ingredien, Aktiviti Ketara, Produk dan Kerangka Alir-pindah, yang lebih kurang sama dengan hasil yang diperolehi daripada kajian Watts (1983), Finegold dan Trumper (1989), Lijnse (1990), Trumper dan Gorsky (1993) dan Trumper (1997).
- (ii) kerangka lazim yang ditunjukkan oleh pelajar ialah Kerangka Depositori dan Produk berbanding dengan Kerangka Berpusatan Manusia, Depositori dan Produk yang ditunjukkan oleh banyak pelajar dalam kajian Finegold dan Trumper (1989), Trumper and Gorsky (1993) and Trumper (1997).
- (iii) pelajar menunjuk antara sifar dan dua kerangka alternatif terhadap tenaga untuk setiap keadaan atau peristiwa. Tetapi apabila semua

keadaan dan peristiwa di ambil kira secara keseluruhan, 15.15%, 21.21%, 27,27%, 27.27% dan 9.09% pelajar masing-masing menunjukkan lima, empat, tiga, dua dan satu kerangka alternatif bagi tenaga.

Beberapa implikasi daripada kajian telah dibincangkan dan beberapa cadangan telah pun disyorkan untuk kajian lanjutan.

Abstract

This study was aimed at investigating the alternative frameworks of energy of 33 Form Four students from a girls' school in Kuala Lumpur and to compare the frameworks obtained with those of other similar studies. The subjects of study comprised of students who had volunteered to participate in the research. Based on the six instances and events provided, the interview-about-instances/events (IAI/E) methodology was used to collect data. Students' alternative frameworks of energy were identified from the analysis of their verbatim responses for each of the instances or events. Findings showed that :

- (i) the students manifested six different frameworks of energy, namely, the Human Centred, Depository, Ingredient, Obvious Activity, Product and the Flow-transfer Frameworks which were similar to the frameworks of energy found in Watts' (1983), Finegold and Trumper's (1989), Lijnse's (1990), Trumper and Gorsky's and Trumper's (1997) studies.
- (ii) the common frameworks manifested by the students were the Depository and Product Frameworks compared with the Anthropocentric, Depository and Product Frameworks which were manifested by many students in Finegold and Trumper's (1989), Trumper and Gorsky's (1993) and Trumper's (1997) studies.
- (iii) students manifested between zero and two different frameworks of energy for a particular instance or event. Whereas when all the

instances and events were taken as a whole, 15.15%, 21.21%, 27.27%, 27.27%, 9.09% of the students respectively manifested five, four, three, two and one framework of energy.

Some specific implications arising from the study were discussed and a few recommendations were also suggested for further studies.

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