ABSTRACT

The aim of the study was to examine the implementation of the 60:40 policy in three selected regular day secondary schools. A research model together with four research questions was used to facilitate the research study. The multiple case study was adapted for the purpose of a qualitative study to gain an insight of how three selected groups of teachers implement the 60:40 policy in three different sites. Concurrently three groups of Form 4 students in the science stream in the three sites were also selected for the research study. The approach involved understanding and describing the activities of the selected group members in implementing the said policy. It was a flexible approach to deal with human behaviour in a complex and dynamic environment like the education system. The primary data was gathered by the use of observation, questionnaire and interview. The overall finding strongly suggests to the fact that the secondary schools were not ready to implement the 60:40 policy. The school settings were not ideal for the teaching and learning of science. The problem of not having enough trained and qualified science teachers persisted. Teacher's attitudes, beliefs and values towards the students studying science subjects needed some transformation. The system of student selection for the study of science in Form 4 needed to be reformed in order to improve the teaching and learning process. MOE and parents had to be more aggressive to encourage more students to study science. The prevailing demand conditions in the industries needed improvement to encourage more students to study science. The science students were interested to study science but the teaching-learning process and the facilities were not conducive enough for the learning of S/T. The teachers had the perception of the science students short of the prerequisites for the study of science subjects at the Form 4 level. The inability to achieve the 60:40 policy so far was due to the wrong strategy for the implementation of the said policy. The need of intellectual capability had not been seriously considered before the implementation process. This

aspect had a more serious impact on the implementation process than the tangible assets which could be rectified more readily. The human assets like the students and teachers had not been given the due recognition for the realisation of the policy. The success of the policy depended greatly on the performance of the teachers, the implementers but they had been left to hunt on their own without proper training, coordination and collaboration with the policy makers. It needed a team effort making up of the planners and implementers to ensure the success of the implementation of the national policy. Suggestions to facilitate the implementation of the 60:40 policy included centralisation of S & T schools, the supply and demand for science education, a systems approach, a spiral curriculum for science education from primary to secondary schools and the recognition of the teachers.

ABSTRAK

Tujuan kajian ialah untuk mengkaji pelaksanaan dasar 60:40 di tiga buah sekolah menengh harian biasa yang terpilih. Satu model dan empat soalan kajian digunakan untuk menjalankan kajian ini. Kajian secara kolektif disesuaikan untuk tujuan kajian kualitatif bagi mengenalpasti bagaimana tiga kumpulan guru-guru terpilih melaksanakan dasar 60:40 di tiga tempat yang berbeza. Secara serentak tiga kumpulan pelajar tingkatan 4 beraliran sains dalam tiga tempat dipilih untuk kajian tersebut. Pendekatan ini merangkumi persefahaman dan penggambaran tentang aktiviti ahli-ahli golongan terpilih ini dalam melaksanakan dasar ini. Ia satu pendekatan fleksibel dalam menangani tingkah laku manusia di dalam suasana kompleks dan dinamik seperti sistem pendidikan. Data asas dikumpulkan melalui penggunaan kaedah pemerhatian, soal selidik dan temu duga. Penemuan keseluruhannya mendapat bahawa sekolah menengah tidak bersedia melaksanakan dasar 60:40. Persekitaran sekolah tidak ideal untuk pengajaran dan pembelajaran sains. Masalah kekurangan guru terlatih dan berkelayakan sains masih berterusan. Aspek-aspek yang efektif seperti sikap, kepercayaan dan nilai guru terhadap pelajar yang mempelajari sains perlu diubah. Sistem pemilihan pelajar-pelajar untuk mengikuti aliran sains di Tingkat 4 perlu diubah semula untuk memperbaiki proses pembelajaran. Kementerian Pendidikan dan ibu bapa perlu lebih agresif menggalakkan lebih ramai pelajar mengambil pembelajaran sains. Keadaan permintaan lazim di industri-industri perlu diperbaiki untuk menggalakkan lebih ramai pelajar untuk belajar sains. Pelajar-pelajar sains berminat mempelajari sains tetapi proses pengajaran dan pembelajaran serta kemudahan-kemudahan tidak cukup kondusif bagi pembelajaran sains. Para pihak guru mempunyai tanggapan pelajar-pelajar sains kekurangan syarat serta kelayakan untuk mengikuti pembelajaran sains di

tahap Tingkatan 4. Ketidakupayaan mencapai dasar 60:40 setakat ini adalah disebabkan kesalahan strategi bagi pelaksanaan dasar tersebut. Keperluan keupayaan intelek belum lagi dipertimbangkan secara serius sebelum proses pelakasanaan. Aspek ini mempunyai kesan yang lebih serius ke atas proses pelaksanaan berbanding aset-aset lain yang lebih mudah ditangani. Aset manusia seperti pelajar dan guru tidak diberi penghargaan sewajarnya untuk merealisasikan dasar ini. Kejayaan dasar adalah amat bergantung kepada prestasi guru sebagai pelaksana tetapi mereka telah diabaikan tanpa latihan yang sesuai, penylarasan ataupun kerjasama dengan para penggubal dasar. Usaha bersama yang melibatkan perancang dan pelaksana adalah perlu bagi memastikan kejayaan perlaksanaan suatu dasar kebangsaan. Cadangan memudahkan perlaksanaan dasar 60:40 merangkumi pemusatan sekolah-sekolah sains, menyediakan bekalan dan permintaan pendidikan sains, satu pendekatan sistem, kurikulum berpusar untuk pendidikan sains dari peringkat sekolah rendah hingga sekolah menengah, serta pengiktirafan tenaga pengajar.