Summary

The primary concern of this study was to investigate the effects of using moral dilemma episodes in science lessons on moral values and academic performance of Form One students.

Two instruments, the MVQ and the SAT, were developed and administered to one hundred and thirty-three students in four schools in Wilayah Persekutuan. T-tests and ANOVA were used to analyse the empirical information collected.

The sample for this study was confined to Form One students. The students were divided into two groups: the experimental group and the control group. Each group consists of students staying in housing estates (HES) and students staying in squatter areas (SAS).

Listed below are the major findings of the study:

1. There was a significant difference between students in the experimental group and students in the control group with regards to their moral values after being exposed to the moral dilemma episodes.

2. There were significant increases in the student's moral reasoning in three areas of moral values, namely cleanliness, cooperation and responsibility after being exposed to the moral dilemma episodes.
There was no significant difference between boys and girls with regards to their moral values after being exposed to the moral dilemma episodes.

There was no significant difference between students in the experimental and control groups with regards to their academic performance after being exposed to the moral dilemma episodes.

The findings of the study are as follows:

Students in the experimental group did not perform significantly better academically after being exposed to the moral dilemma episodes.

There was a significant difference between students residing in squatter areas and students residing in housing estates with regards to their moral values. Students residing in housing estates have better moral values than students residing in squatter areas.

There was a significant difference between students residing in squatter areas and students residing in housing estates with regards to their academic performance. Students residing in housing estates performed academically better than students residing in squatter areas.
Students residing in the squatter areas improved their moral values better than students residing in the housing estates after being exposed to the moral dilemma episodes.

Recommendations

The results and interpretations of this study support the use of moral dilemma episodes in inculcating moral values among the students in science lessons. Hence, it is recommended that:

- The science teachers should write their own moral dilemma episodes which are relevant to the science content taught in a particular lesson. If time is limited, the teachers could combine a few moral values in one episode and discuss them at the end of several lessons or a lesson unit.

- Writers of textbooks could introduce some moral dilemma episodes in their textbooks or a special book on moral dilemma episodes that are relevant to the science lessons could be written.

- In-service and pre-service courses should include some teaching on the writing of moral dilemma episodes and facilitating discussions in their training programme. This enables the teachers to have some idea of how to conduct moral dilemma approach in the classrooms.
Other subject teachers could adopt this approach to inculcate values in their classrooms.

All papers in the examinations, be it a school or public exam, should have value-laden questions which require the students to think and give reasons for their value choices.

Suggestions for further research

Several questions have arisen during the course of the conduct of this study. Several other studies may be required in order to answer some of these questions. Some of these are:

- In this study, the sample was limited to Form One students studying in four schools in Wilayah Persekutuan. Other samples could be chosen for a similar study. For example, students may be taken from rural areas or from higher Forms. With such extra studies, the result can be made more generalizable.

- A total of sixteen values were recommended by the Ministry of Education to be inculcated in school lessons. However, in this study, the researcher focussed on only five value areas. It is recommended that other value areas be similarly investigated.
Several case studies may be conducted to investigate whether moral training could really improve moral values of the students. Interested parties from the Ministry of Education may carry out a longitudinal study to enable them to trace the moral development of the students from Form One to Form Five.

A similar study could be carried out to investigate further why squatter area students tend to have lower moral values than students staying in housing estates and how their level of moral values could be significantly increased.

The Moral Values Questionnaire used for the present study could be improved and used for studying moral values of the students at different levels and different values.

In this study, the first three levels of Bloom's cognitive domain were investigated. Further research could be designed to include other levels of Bloom's cognitive domain in science classrooms. This is especially necessary for use with students in the upper Forms.