



UNIVERSITI PUTRA MALAYSIA

**EFFECTIVENESS OF INTERPRETIVE EDUCATION PROGRAM
IN INFLUENCING RURAL SECONDARY SCHOOL STUDENTS'
CONSERVATION BEHAVIOR**

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By

EVELYN LIM AI LIN

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia,
in Fulfillment of the Requirements for the Degree of Doctor of Philosophy**

June 2014

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Doctor of Philosophy

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June 2014

Chair: Associate Professor Manohar Mariapan, PhD

Faculty: Forestry

Many out-of-school environmental education programs for school students in Malaysia lacked the capacity to influence behavior. The study compares the effectiveness of the non-interpretive and interpretive education programs in influencing rural secondary school students' intention to be an organizer of a Malayan Tapir education program in school.

The study utilized focus group discussion to elicit secondary school students' attitudes and emotions toward the Malayan Tapir. Students' salient beliefs toward their involvement as an organizer of a Malayan Tapir education program in school were also elicited based on the Theory of Planned Behavior (TPB) theoretical framework. Findings from the discussion were used to develop a self-reported questionnaire and an interpretive education program based on the enjoy, relevant, organized and thematic (EROT) interpretive model. The pre-test post-test experiment design was utilized to compare the effectiveness of the non-interpretive and interpretive education programs. Pre-test was conducted before the intervention while the post-test was conducted after the intervention. A delayed post-test was conducted six months after the intervention. Data was statistically analyzed to compare the effectiveness of the interventions between groups and tests.

Comparing between tests, the pre-test and post-test results for the control group showed no improvement in the TPB constructs mean scores with significant differences observed for the attitude, subjective norm and perceived behavioral control constructs. Non-interpretive group showed no improvement in the TPB constructs mean scores and significant difference was only observed for the subjective norm construct. For the

interpretive group, tests mean scores improved for all TPB constructs with significant differences observed for the subjective norm and behavior intention constructs. When the pre-test and delayed post-test were compared to determine the long-term effect of the intervention programs, no significant differences between the mean scores were observed for the control and non-interpretive groups. There were no improvement in the constructs' mean scores for the interpretive group but significant differences between tests were observed for the attitude and perceived behavioral control constructs.

Comparing the four TPB constructs between interventions groups, significant difference in the pre-test was observed for the attitude construct with interpretive group having stronger positive attitude as compared to the control and non-interpretive groups. Significant differences were observed for all TPB constructs in the post-test with interpretive group scoring higher mean scores as compared to the control and non-interpretive groups. No significant differences between groups for all the TPB constructs in the delayed post-test. The conduct of the pre-test had an effect on the groups' post-test while students' gender had an effect on the groups' post-test results.

The EROT interpretive results showed that interpretive program was more successful in making the program enjoyable, relevant, organized and thematic; and evoking students' emotion to take action as compared to the non-interpretive program.

The study has shown that the interpretative model was more successful in influencing students' beliefs toward the Malayan Tapir and students' intention to be involved as an organizer of the Malayan Tapir education program in school. The interpretive program was also replicable to other locations and wildlife (i.e. Orang utan).

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk Ijazah Doktor Falsafah

**KEBERKESANAN PROGRAM PENDIDIKAN INTERPRETASI DALAM
MEMPENGARUHI TINGKAH LAKU KONSERVASI MURID-MURID
SEKOLAH MENENGAH LUAR BANDAR**

Oleh

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Di Malaysia, kebanyakan program pendidikan alam sekitar di luar sekolah untuk murid-murid sekolah kurang berkemampuan untuk mempengaruhi tingkah laku. Justeru itu, kajian ini membanding keberkesanan program pendidikan berbentuk bukan interpretasi dan interpretasi dalam mempengaruhi niat murid sekolah menengah dari kawasan luar bandar untuk menganjur program pendidikan alam sekitar berkenaan hidupan liar Tapir di sekolah.

Kajian ini menggunakan kumpulan perbincangan fokus bagi menentukan sikap dan emosi murid-murid sekolah menengah terhadap hidupan liar Tapir. Kepercayaan-ciri utama murid sekolah menengah terhadap penglibatan mereka sebagai penganjur program pendidikan berkenaan Tapir di sekolah turut dikenalpasti berdasarkan Theory of Planned Behavior (TPB). Hasil dapatan kumpulan perbincangan fokus ini digunakan untuk menghasilkan borang soal selidik dan juga mereka bentuk program pendidikan alam sekitar berdasarkan model interpretasi enjoy, relevant, organized and thematic (EROT). Kajian ini menggunakan eksperimen pra dan pos bagi membandingkan keberkesanan program pendidikan berbentuk bukan interpretasi dan interpretasi. Ujian pra dilaksanakan sebelum pelaksanaan program intervensi manakala ujian pos dilaksanakan sesudah pelaksanaan program intervensi. Ujian pos penangguhan dijalankan enam bulan selepas pelaksanaan program intervensi. Data dianalisis secara kuantitatif bagi membanding keberksanan program intervensi antara ujian dan kumpulan intervensi.

Perbandingan antara ujian menunjukkan antara ujian pra dan pos, tiada penambahan positif dalam skor min bagi keempat-empat konstruk TPB bagi kumpulan kawalan. Walau bagaimanapun, perbezaan ketara diperoleh bagi konstruk sikap, norma subjektif dan kawalan tingkah laku. Perbandingan antara ujian juga menunjukkan tiada penambahan positif dalam skor min bagi semua konstruk TPB bagi kumpulan bukan interpretif tetapi perbezaan ketara diperhatikan bagi konstruk norma subjektif. Hanya kumpulan interpretif menunjukkan penambahan positif dalam skor min bagi semua konstruk TPB dengan perbezaan ketara diperhatikan bagi konstruk norma subjektif dan niat tingkah laku. Perbandingan antara ujian pra dan pos penangguhan bagi menentukan kesan jangka panjang program intervensi menunjukkan tiada penambahan positif dalam skor min bagi semua konstruk mahupun mencatat sebarang perbezaan ketara konstruk TPB bagi kumpulan kawalan dan bukan interpretasi. Walaupun kumpulan interpretasi tidak menunjukkan penambahan positif dalam skor min bagi semua konstruk TPB, perbezaan ketara antara ujian diperoleh bagi konstruk sikap dan konstruk kawalan tingkah laku.

Perbandingan keempat-empat konstruk TPB antara kumpulan intervensi untuk ujian pra menunjukkan perbezaan ketara bagi konstruk sikap. Kumpulan interpretif menunjukkan sikap yang lebih positif berbanding kumpulan kawalan dan bukan interpretasi. Perbezaan ketara antara kumpulan bagi semua konstruk TPB diperoleh dalam ujian pos. Kumpulan interpretasi menunjukkan skor min yang lebih positif bagi semua konstruk TPB dalam ujian pos berbanding kumpulan kawalan dan kumpulan bukan interpretasi. Tiada perbezaan ketara antara kumpulan bagi skor min semua konstruk TPB dalam ujian pos penangguhan. Ujian pra dan juga jantungina murid-murid didapati mempengaruhi ujian pos.

Model interpretasi EROT menunjukkan program interpretasi lebih berjaya menghasilkan program yang bertema dan teratur; menyeronokkan, relevan dan mampu mempengaruhi emosi murid-murid untuk bertindak berbanding program bukan interpretasi yang bersifat informatif.

Kajian ini telah menunjukkan bahawa model interpretasi mampu mempengaruhi kepercayaan-ciri utama murid-murid terhadap hidupan liar Tapir dan niat tingkah laku murid untuk terlibat sebagai penganjur program pendidikan Tapir di sekolah. Kajian ini juga mampu direplikasi pada kumpulan murid yang sama di lokasi yang berlainan dan pada hidupan liar lain (i.e. Orang utan).

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I certify that a Thesis Examination Committee has met on 30 June 2014 to conduct the final examination of Evelyn Lim Ai Lin on her thesis entitled “Effectiveness of Interpretive Education Program in Influencing Rural Secondary School Students’ Conservation Behavior” in accordance with the Universities and University College Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U. (A) 106] 15 March 1998. The committee recommends that the student be awarded the Doctor of Philosophy.

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DECLARATION

Declaration by graduate student

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