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#### **SCIENCE & TECHNOLOGY**

Using Kaplan Meier and Cox Regression in Survival Analysis: An Example

A Study on the Higher Moment of a Biased Estimator

The Structural Modifications of *Candida albicans* Cells After Treatment with *Cinnamomum zeylanicum* Blume Crude Extract

Simulation of Routing Probability in Ad Hoc Networks

Decomposition and Dipteran Composition on Exposed Carcasses in an Oil Palm Plantation: A Forensic Entomology Study

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#### Foreword

This is the first time that ESTEEM Academic Journal UiTM Pulau Pinang has come up with 2 publications in a year! Previously, ESTEEM was published once biennially.

For these publications to materialise, I would like to thank Associate Professor Mohd Zaki Abdullah, the Director of UiTM Pulau Pinang for his unflinching support and who always told me, "Go ahead, don't worry about the money!".

Both the Associate Professor Mohd Zaki Abdullah and Dr. Mohamad Abdullah Hemdi, the Deputy Director of Academic Affairs really provided me with a great deal of assistance in ensuring that there are sufficient articles for publishing. Both of them have emphasized the need for lecturers to embark on journal writing. Incidentally this is one of the prerequisites for promotion among the academic staff members of UiTM Pulau Pinang.

I do not think I can run the show alone without the help from the editorial board, reviewers and the cooperation from University Publication Centre (UPENA) of UiTM Malaysia. My special thanks to Mr. Mohd Aminudin Murad for his efficiency in editing articles and to Dr. Khairil Iskandar Othman for speeding up the final stage of printing process.

Since writing is an important criterion in rating a university, I feel it is a great responsibility for me to produce a good journal. Fellow colleagues, let's work closely to put UiTM Pulau Pinang in the final list of Anugerah Kualiti Naib Canselor (AKNC) and Anugerah Kualiti Perdana Menteri (AKPM) by submitting more quality articles to ESTEEM!

Lastly, let me end by thanking all of you for giving your unwavering support to UPENA.

The Chief Editor November, 2008

## A Study of At-Home and Out-of-Home Parental Involvement and Student Achievement in English

Liaw Shun Chone Angelina Subrayan

#### ABSTRACT

This research discussed the strength of relationship between parental involvement and student achievement. Parental involvement in children's learning at-home and out-of-home is considered crucial to the achievement in the English Language. This study includes both quantitative and qualitative research. The quantitative study consists of a sample of 160 students from 4 different schools in an urban town. The researchers administered questionnaires to students to investigate the significant relationship between parental involvement and student achievement. The quantitative study found that parental involvement at-home and out-of-home correlated positively with varying degree to student achievement in the Penilaian Menengah Rendah (PMR) English Language. Generally, the findings from the interviews with parents in qualitative research reflected almost similar results obtained from the questionnaires administered to upper secondary students in quantitative research. Comparatively, the results of parents' intensity of involvement athome and out-of-home correlated with student achievement in PMR English examination.

**Keywords:** parental involvement, student achievement, parents' educational level, race, English proficiency

#### Introduction

When Malaysia achieved independence in 1957, language policy makers shifted their focus on Malay identity and status. Under the Razak Report in 1956, the Malay Language replaced English as the medium of instruction. The relegation of English as a medium of instruction to the status of a subject in the school curriculum resulted in the deterioration of the standard of English in comparison to other academic subjects. The re-introduction of English as the medium of instruction for

Mathematics and Science in schools is still closely monitored. However, it is not within the ambit of this research paper to study on the repercussions and effectiveness of adopting such a switch in the language for these two subjects. Nevertheless, the poor performance of English as a subject when compared to the other language subjects still prevailed in the Form 3 Penilaian Menengah Rendah (PMR) public examination. According to the results provided by Lembaga Peperiksaan Malaysia, the achievement figure for English Language proficiency in the PMR 2005 and 2006 were 73.8% and 71.4% respectively. This was a stark contrast to that of Bahasa Malaysia, which secured 92.3% and 92.7% passes for the concurrent years. What was more worrying was that the English Language performance was way below the achievement performance for the other vernacular languages in PMR 2005; Arab (90.3%), Mandarin (87.0%), Tamil (75.3%), Punjabi (94.9%), and Iban (94.6%). Similar trends again prevailed for pass rates in Arab (81.3%), Mandarin (87.1%), Tamil (73.9%), Punjabi (94.2%), and Iban (94.6%) in PMR 2006. What has happened to the status of English as the second language in Malaysia? Has English become more of a foreign language like in Thailand or Japan? It is of particular interest to note that student achievement in these vernacular languages are encouraging with over 73% passing rate. Why is it so? It could be that students are more exposed and conversant in their mother tongue.

Cruez (2002), in a survey carried out found that only 600 out of the 13,000 graduates who registered with the Human Resources Ministry for jobs in the service and marketing sectors in the first 10 months of the year were employed, while the rest were rejected due to poor command of English and lack communication skills. As such, the government urgently need Malaysian students to master English (Leong & Ritikos, 2003) or lose out in the globalized world where English dominates the international trade and information technology sectors. From a typical school time-table illustrated by Kamal Shukri (2002), the researchers infer that Form 3 students only spend less than 8% of his time on academic studies annually at school. They only spend 1.5% of their time exposed to learning English in schools. The researchers feel that school is a weak intervention in achieving English proficiency. Students spend more time outside the schools with their friends in the community or at home with their family. Jencks et al. (1972) found that the students' home environment has a bigger influence on learning achievements of the students than the school can have. To what extent are Jenck's findings valid?

### Limitations of the Study

The researchers also take into account the 3 major groups in Malaysia. They are the Malay, Chinese and Indian students who are mostly exposed to 3 languages by the time they enter Form 3 to sit for PMR public examination. As the samples are drawn from an urban area, the study of similar parental involvement trends in a rural area cannot be ascertained.

Lastly, the study is both a quantitative research through administering questionnaires to students and a qualitative study such as interviews with urban parents. However, many of the parents are either quite reluctant to be interviewed or busy with their work.

### **Literature Review**

In 1966, the Coleman report argued that variables associated with students' homes, rather than with school, accounted for a significant share of student success (Coleman et al., 1966). Since that time, considerable research has documented the association between parental involvement and a number of positive outcomes. This discovery also led to a change in the emphasis of educational study from the concern that previous research placed on the impact of socioeconomic status and intelligence on school performance, to the role played by the home environment and the extent of parents' influence in the child.

# Catsambis' Framework for Six Types of Parental Involvement

Parental involvement in education may take several forms with some having more impact on achievement than others. Using Epstein's six types of parental involvement as a base (Epstein, 1987), Catsambis (1998) defines high school parental involvement as shown in Table 1.

Catsambis measured the impact each type of involvement had on student achievement. Student achievement was measured by standardized test scores and total credits completed in Mathematics, English and Science.

Catsambis compared families by their social background (race, education, job and income) and composition (size, number of working and non-working parents) to see if these factors affected how parents interact with school and their children. She also compared students by

Туре	Activity	Involvement
Type 1	Parenting	Supervising behaviour Knowing what courses student is taking Supervising academic work Parent-teen activities
Type 2	Communications	Parent-teen communications Volunteering at schools and attending school activities
Type 3	Supporting school	Encouraging high school graduation Learning about post secondary education
Type 4	Learning activities	Private educational expenses
Type 5	Decision making	Not included in the 12th - grade questionnaire
Type 6	Collaborating with community	Parent-to-parent communication

Table 1: Activities Related to Six Types of High School Parental Involvement

their language background (English spoken at home or not), engagement in school (attendance and homework completed) and achievement record. The study considered the effects to be significant only if they appeared in families of all background.

The study confirmed the importance of considering the many dimensions of parental involvement in education. Within Epstein's six types of parental involvement, only some have a significant positive effect on achievement in high school. For example, Catsambis found that parenting practices tend to have weak effects on students' test scores. At high school level, three forms of involvement have very limited or no effects. These are communicating with school, supporting the school by attending events and communicating with other parents.

The researcher intends to investigate whether different levels and types of parental involvement in students' education especially with regard to the English Language during the secondary school years do 'make a difference or not'?

# Related Research on Parental Involvement and Student Achievement

Stevenson and Barker (1987) found a positive relation between parental involvement and the student school performance in a sample of 179 grade school children, parents and teachers.

However, the Gutman and Midgley (2000) study of fifth and sixthgrade students from 62 families in a Michigan district found that parental involvement as a single variable did not appear to be related to students' grades. They concluded that students with high levels of both family (parental involvement) and school (teacher support and feelings of belongings) factors experienced higher grades than did their classmates who had higher levels of either one or none of the factors.

Dornbusch, Ritter, Leiderman, Roberts, and Fraleigh et al. (1987) found that correlation between parenting styles and achievement is insignificant for all Asian students. Schneider and Lee (1990) found that family-school linkages less influence Asian students than other students.

#### **Related Research on At-Home Parental Involvement**

Parents are willing to become involved but they do not know how to help their children with academic tasks at home, and in general, are fearful of doing more harm than good (Simich–Dudgeon, 1986).

Shumow and Miller (2001) noted that at-home parental involvement is related to students' positive attitudes toward school but negatively related to grades and test scores. They interpreted their findings to mean that parents of struggling students provide more help at home than parents of successful students. In their analysis of data from 25 studies, Fan and Chen (1999) found a similar pattern. They also suggest that parents impose more controls when children are not doing well. These studies suggest that parents whose children have academic or behaviour problems tend to supervise their children more.

#### **Related Research on At-School Parental Involvement**

A study by Simich–Dudgeon (1986) found that attempts by teachers and school officials to involve limited-or-non-English-proficient (LEP/NEP) parents in the education of the children are very often interpreted as a call for interference. The overwhelming majority of LEP/NEP parents believe that the school has not only the qualifications, but also the responsibility to educate their children, and that any amount of parent 'interference' is certain to be counter-productive. Simich–Dudgeon further adds that while most LEP/NEP parents do not have the English language proficiency to engage in many of the typical parent involvement activities, they may be very successfully involved in parent-school collaboration at home. Besides, parental preferences are not necessarily

what school people think they are. Parents do not like to deal with school staff who are overly businesslike, who appear patronizing or who talk down to them (Lindle, 1989). Schools often want parental involvement 'only when it is wanted'. Staff of some schools wants parents to be involved only in specific ways and at times determined by the staff (Coulombe, 1995).

### Methodology

This is both a quantitative and qualitative study to determine the significant relationships between the variables. In the quantitative study, a correlation statistics is used to find out the relationship between parental involvement and student achievement in English Language. In the quantitative study, students were told to circle their intensity of agreement or disagreement with each of the items in the questionnaire. It follows the five point Likert scale in the questionnaire.

In the qualitative study, parents of Form 4 and 5 Malay, Chinese, and Indian students were selected from several schools as participants in the interview. They were either interviewed through telephone or face–to–face meeting to ascertain their roles as parents' at-home and out-of-home in improving their children's English competence. The data collected were then interpreted to facilitate analysis.

To generalize the results of this study, 160 Malay, Chinese and Indian Form 4 and Form 5 students were selected from 4 different urban schools in Butterworth. The qualitative research was confined to interviews with parents from 4 schools. Unlike quantitative study which involves students' responses through the administering of questionnaires, the researchers had instead conducted semi-structured interviews among parents in qualitative findings. Information obtained through such interviews was either jotted down or recorded for analysis later on.

Inferential statistics was used to uncover any significant difference of means or any significant relationship between the variables as stated in the research study. Qualitative study was also carried out on parents through interviews. Data collected were organized and classified into 4 dimensions.

### **Results of Discussion**

#### **Quantitative Findings**

#### Parental Involvement and Student Achievement in English

Somers'd is appropriate in finding the correlation between two variables which are ordered categories. In this study, both variables (student achievement in PMR English and parental involvement) are ordered categories and the role of the independent and dependent variables are clearly stated. Student achievement in PMR English is the dependent variable and parental involvement is the independent variable. Since student achievement in PMR English is the dependent variable, we refer to the value of Somers'd statistic, .436. The result is significant, thus, there is a correlation between parental involvement and student achievement in PMR English. In this case, the parental involvement is the cause of student achievement in PMR English. Therefore, there is a correlation between parental involvement achievement in PMR English. Therefore, there is a correlation between parental involvement achievement in PMR English.

# At-Home Parental Involvement and Student Achievement in English

For further analyses, Somers'd is used to find the relationship between at-home parental and the student achievement in PMR English. The value of Somers'd statistic is 0.426. The result is significant (p < .05), thus, there is a correlation between at-home parental involvement and student achievement in PMR English, with student achievement in PMR English as dependent variable and at-home parental involvement as the independent variable. Thus, there is a correlation between at-home parental involvement and the student achievement in PMR English.

# Out-of-Home Parental Involvement and Student Achievement in English

In addition, Somers'd is used to find the association between out-ofhome parental involvement and the student achievement in PMR English. The value of Somers'd statistic is .417. The result is significant (p < .05), thus, there is a correlation between out-of-home parental involvement and student achievement in PMR English, with the latter as dependent variable and the former as the independent variable. Thus, there is a correlation between out-of-home parental involvement and the student achievement in PMR English.

#### **Quantitative Findings**

# Relationship between Parental Involvement and Student Achievement in English

From the findings disclosed above, there was a strong correlation (p = .612) between overall parental involvement and student achievement in English. If we made a comparison between the at-home involvement (.594) and the out-of-home parental involvement (p = .576), there was definitely a higher parental involvement on the former. The difference in value of p was .018, which was quite slightly in favour of parental involvement at-home.

The difference could be due to the reason mentioned earlier by Schneider and Lee (1990) that family – school linkages exerted less influence on Asian students than other students of different racial backgrounds. While it was obvious in this study that parental involvement at-home correlated higher to student achievement in English than parental involvement out-of-home, the involvement was more of the supportive and supervisory roles rather than communicative in nature. What that meant was that there was no direct input of the language with the children (i.e., parents deliberately communicating in English with their children at-home). In fact, four items relating to 'communicating in English' dimension were removed because of low reliability. Many of these parents were either not English educated, non-English speakers or hardly able to help their secondary schoolchildren directly in English, much less in ensuring a high achievement in the language at PMR level.

Nevertheless, these limited-or-non-English-proficient (LEP/NEP) parents as found out by Simich (1986) were more successfully involved at-home by making decision and monitoring their children's progress in English so as to ensure that their children were exposed to the language and ultimately performed well during the PMR examination. What these LEP/NEP parents lacked in the communicative skills of the language themselves, they made up for their supportive, decision-making and monitoring roles as shown in the strong relationship of parental involvement at-home and moderate relationship of parental involvement out-of-home in the English Language PMR examination. It went against

the analyses by Fejgin (1995) that parental involvement did not explain much of the variance in Asian students' achievement.

# Qualitative Study: Discussions and Relationship to Quantitative Research

Parental involvement may mean different things to parents from different ethnicity and level of educational background. From this qualitative research, students who excelled in PMR English have parents who are involved at-home, out-of-home or both. It corresponded with the result in quantitative research that at-home and out-of-home parental involvement correlated strongly with PMR English examination.

### Implications of Study

#### Parental Involvement and Student Achievement

Qualitative and quantitative data obtained in this study supported the contention that parental involvement was an important element in student academic achievement. At-home and out-of-home parental involvements consistently correlated with student achievement in the English Language. Parental involvement in one form or another contributes with varying degree to English Language achievement. In order to impose on student achievement in English proficiency, there is a need to take into account the parental involvement factor more seriously. The implication then, for language planners and school administrators, is how to involve parents so as to improve on their children's proficiency in the English Language. This study was carried out in 4 urban schools in Butterworth. More researches on student achievement in the English Language need to be conducted so as to find out whether different kinds of parental involvement are involved in various urban/rural areas among the different races.

### Recommendations

# Building Partnership with Schools to Enhance Parental Involvement

Even though at-home parental involvement correlated strongly with student achievement in the PMR examination grades, the researchers

suggest that the out-of-home parental involvement should be enhanced. This is where the school should play a more active role in harnessing partnership with parents. It is regretful that parents rarely collaborate with schools through the Parents Teachers Association to discuss educational matters especially with the continuing decline of English Language in the recent 2006 PMR examination.

#### Follow-Up Programmes

Regular meetings have to be carried out to build rapport with the school and parents. Such relationships must be consistent and intentional. From the first meeting, teachers have to investigate parents' reluctance to collaborate with the school. If as what Coulombe's findings (1995) were true about school wanting parents to be involved only in specific ways, the school should warmly welcome parents to its door.

### **Promoting Self-Efficacy Among Parents**

As pointed out by Shumow and Lomax (2001), parents' higher feelings of efficacy showed higher parental involvement both in school and at home and in turn will help to better children's performance in school. Educators and administrators should find ways of gathering parents of students weak in English (usually English illiterates and from the lower income bracket) to demonstrate to them on how to be involved in assisting their children in the language. It is more convincing when English illiterate parents in such similar circumstances share their views openly on how they overcame their limitations and succeeded in assisting their children's achievement in English through their involvement at-home and out-ofhome.

### Conclusion

As a whole, parents are generally more involved at-home with their children especially among the more educated. There is also higher correlation of parental involvement at-home to student achievement to the PMR English Language paper. On one hand, it shows the keen involvement of parents at-home. However, recommendations are made so as to involve more parents who may not be so proficient in English, less educated and/or with lower income. They can be more involved in programmes promoted by the schools, community and government agencies through informal meetings, demonstrations and workshops in public libraries to enhance their self-efficacy. Ultimately, parents will gain useful insights on how to involve themselves at-home and out-ofhome. Such parental involvement leads to student achievement in the English Language.

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