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THE PERFORMANCE OF PRE-SCHOOL MALAY CHILDREN IN MALAY
AND ENGLISH LANGUAGE TASKS – A COMPARATIVE STUDY

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THE PERFORMANCE OF PRE-SCHOOL MALAY CHILDREN IN MALAY
AND ENGLISH LANGUAGE TASKS - A COMPARATIVE STUDY

Dr Ahmad Mattar, the Minister of Social Development, Singapore, in his recent address to Malay parents during one of the dialogue sessions between parents and Mendaki (Council for Education of Muslim Children), has released statistics to show the lower academic performance of Malay children at the PSLE (Primary School Leaving Examination), GCE 'O' and GCE 'A' Level Examination. Recognising that education is one of the main problems faced by the Malay Community a total-approach to education has been adopted by Mendaki. This means that pre-school education for Muslim children which had not been under scrutiny before, will be given due emphasis.

At this point an in-depth research in pre-school Malay education should be undertaken as this stage forms the critical basis for a successful education in future.

Even though pre-school education in Singapore had been in existence for a long time, for the Malay community mass attendance in kindergarten only began in the late seventies. For the majority of Malay pre-schoolers, pre-school education marks the beginning of the process of being 'formally' educated and this take place either in the 'PAP' type of kindergartens or in the kindergartens run by the Peoples' Association. Very few Malay children were sent to kindergartens run by the private bodies and it is only recently that pre-school classes were offered by Muslim organisations who run the courses at the precincts of the mosques. Pre-primary education for children taking Malay as a second language is not yet available presently.

While research in child development of Singapore children will also include a sample of Malay children, the fact that these minority children comes from socially culturally and economically different background, warrants a special study to undertaken for these children.

This paper is an attempt to provide baseline data in one aspect of Malay children's development, namely in the important language area. A special focus is made in studying the nature and patterns of responses manifested in their performances in the various language tasks. From this, hopefully glimpses of the features of early bilingualism in these children (mother tongue, Malay) as they cope and attempt to learn a second language (English) could be seen.

Specifically, the research questions that motivate this study are :

- . How do the pre-school Malay pupils perform in the Malay Language tasks?
- . How do they perform in the English Language tasks?
- . Are there any significant difference in their performance on the two types of tasks?
- . Are there any difference in the performance between the Malay and non-Malay pre-school children in their language tasks?

Sampling

The data used for this study is obtained from a larger on-going longitudinal research on the Social and Cognitive Development of children in Singapore. The sample of Malay and non-Malay children selected for this study is drawn from the larger sample of children tested during the first and second phase of data collection during Aug to Nov 84 and March to May 85 respectively. Data for the third and fourth data collection is not yet available.

In the first data collection, out of a total number of 584 children tested, 40 of them are Malay pupils. During the second phase, besides retesting part of the sample in first phase, a group of new samples were tested and out of this, 31 Malay children were tested for the first time, making the total number of Malay children tested for the first time during data collection 1 and 2 to be 71. These 71 Malay children forms the subjects and focus of the present study.

The sex, age-group, type of kindergarten and the number of years in kindergarten of these subjects are shown in Table 1A. The list of 12 kindergartens attached by these children are listed in Table 1B.

Table 1A

<u>Age-group</u>	<u>DC1</u>	<u>DC2</u>	<u>Total</u>
4Y - 4Y 5M	-	11	11
4Y 6M - 4Y 11M	3	18	21
5Y - 5Y 5M	17	-	17
5Y 6M - 6Y	12	2	14
6Y +	8	-	8
	40	31	71
<u>Type of Kindergarten</u>			
PAP	19	15	34
PA	21	16	37
	40	31	71

Class in Kindergarten

K1	29	29	58
K2	11	2	13
	40	31	71
<u>Sex</u>			
Male	23	13	36
Female	17	18	35
	40	31	71

Table 1B

List of Kindergarten Centres and Type

	No of subjects
1) Alexandra (PAP)	- 2
2) Ang Mo Kio (PAP)	- 4
3) Boon Lay Garden (PAP)	- 5
4) Bukit Timah (PAP)	- 2
5) MacPherson (PAP)	- 5
6) Marsiling (PAP)	- 9
7) River Valley (PAP)	- 3
8) Ayer Rajah (PAP)	- 4
9) Bedok Community Centre (PA)	- 10
10) Bukit Batok C. C. (PA)	- 7
11) Kuo Chuan C. C. (PA)	- 11
12) Siglap C. C. (PA)	- 9

The Malay Language is the mother-tongue and home language of the Malay subjects of this study. The use of Malay is not only confined to the family domain, but also covering the neighbourhood and school, Malay being the main language used for peer interaction. On the other hand, English is the language of instruction in the kindergartens and in the majority of cases, was only learnt upon admission to the various pre-school centres. On the first phase of data collection, subjects who are in kindergarten 1, had only studied English for about eight months. It is therefore correct to assume that these children had already acquired one dominant language which is Malay and this period marks the beginnings of early Malay-English bilingualism.

The non-Malay sample used as comparative data for analysis were also drawn from the first and second data collection. They were randomly selected but structured to match the main subjects as to the number, sex, age-group, type of kindergarten and the number of years in kindergartens. This is to minimise the effect of any possible extraneous factors that could affect the nature of the findings.

Whenever applicable comparison is also made to another group of non-Malay children. They were randomly selected to match the Malay sample only in age, sex and number, but not the type of kindergarten as this could be an indicator of the socio-economic background of the pupils.

Procedure

Each child was interviewed on a one-to-one basis by researchers and assistants who were specially trained to administer the tests in the home language of the child. This was done in the respective centres during the activity hours of each pre-school centres. Care was taken to have the children comfortably at ease with the researcherers so that positive responses from the children could be obtained. Normally each interview session lasted about 20 minutes for each child, however if the child showed any sign of fatigue or diminishing interest, the session was postponed. The verbaton responses of the children were carefully recorded and whenever appropriate the global response was coded.

Data analysis

Correlation, t-test technique and the analysis of variance are employed in testing research hypotheses.

Selected Findings based on Preliminary Analysis

Based on the preliminary analysis on the available data, some main results are reported here.

1.1 Malay Language Word-Knowledge Test

As expected the success rate of the subjects' performance in this task are very high. 98.5% of subjects obtained correct response for 'things to wear'; 88.4% obtained correct response for 'eating utensils'; 91.2% responded correctly for 'vehicles for transportation' and 99% for 'people in action'. The weakest item for this type of task is for 'occupation' with a percentage success of only 66%; but this task was only administered during the first data collection. (Table 1).

Though ANOVA, a comparison of the age-group of Malay children was obtained. The results indicated that there is no evidence of progression as their ages increases, the younger and older children did equally well in their task. (Table 3)

1.2 Similar results were obtained for the non-Malay children from the same centre type which was used a comparison .

Their performance in their L2 (Mandarin or Tamil) task was also high, but ~~had~~ the Malay children scored significantly higher in two of the vocabulary items, with t-value = 4.77 $p > 0.0001$ and $t = 3.0$ $p > 0.003$ respectively. (Table 3).

- 1.3 A different pattern of response was found when comparison was made between the Malay and non-Malay children from the different type of centres namely from MOE, NTUC and private kindergartens. Their performance in this L2 tasks is significantly lower than both the Malay and non-Malay children from the PA and PAP centres with the Malay children performing significantly higher in all ~~five~~ of the vocabulary items. (Table 4).

Table 2

Malay Language Word Knowledge Test

Percentage Of Correct Response

Item	N	Percentage
Sock	71	98.59
Pants	71	98.59
Dress	71	98.29
Shoes	71	98.59
Cup	71	88.73
Spoon	71	91.55
Bowl	71	91.55
Plate	71	91.55
Bicycle	71	94.37
Car	71	92.96
Aeroplane	71	87.32
Ship	71	90.14
Postman	40	80.00
Nurse	40	35.00
Policeman	40	80.00
Postman	40	45.00
Walking	31	96.77
Eating	31	100.00
Running	31	100.00
Sitting	31	100.00

Table 3

ANOVA among the different age-group of Malay children
on Malay Word-Knowledge

Age	N		Things to wear	Eating Utensils	Vehicles
4Y - 4Y 5M	11	X SD	12 (-)	11.45 (0.82)	11.55 (0.69)
4Y 6M - 4Y 11M	21	X SD	11.81 (0.6)	11.29 (1.42)	11.48 (1.03)
5Y - 5Y 5M	17	X SD	11.94 (-)	11.18 (1.13)	11.29 (1.21)
5Y 6M - 6Y	22	X SD	12 (-)	11.50 (0.91)	11.77 (0.61)

The F value is not significant.

Table 4

Second Language Word-Knowledge Test
T-Test between Malay and Non-Malay children

Tasks/Item	Malay (N=71)		Non-Malay (N=71)		t-value
	Mean	SD	Mean	SD	
Things to wear	11.93	0.35	10.77	2.0	4.77 (**)
Eating utensils	11.35	1.11	10.49	2.14	3.0 (*)
Transportation	11.54	0.92	11.38	1.19	0.87 (-)

** Significant at 0.0001

* Significant at 0.003

(-) not significant

Table 5

Second Language Word-Knowledge Test
T-Test Between Malay And Non-Malay children
For Different Centre-type

Tasks/Item	Malay (N=71)		Non-Malay (N=71)		t-value
	Mean	SD	Mean	SD	
Things to wear	11.93	0.35	9.64	3.1	6.18 (++)
Eating utensils	11.35	1.11	9.22	3.2	5.32 (++)
Transportation	11.54	0.92	10.16	2.86	3.83 (+)

++ Significant at 0.0001 level

+ Significant at 0.0002 level

2.1 English Language Word-Knowledge

In contrast to the subjects' performance in the same task in Malay, the percentage of success for this task is rather low, especially for the 'furniture' item where only 34.16% of the subject scored correctly. Results of the analysis of variance among the different age group of the Malay children on this task, showed that there is no significant difference in the performance of the younger and of the older children, in three of the vocabulary items. The only significant difference is obtained for the "furniture" item, where the older children performed significantly better than the younger children (Table 6).

2.2 Comparative data on the performance of the Malay subjects and the non-Malay subjects of the same age-group, type of centre and sex, indicated a close similarity in their performance (Table 7). The t-test, indicated no significant difference in the performance of both groups.

2.3 On the contrary, there is a markedly significant difference in the performance of Malay children and non-Malay children from the different type of centres (MOE, NTUC and Private Kindergarten). The non-Malay children from these centres scored significantly higher in all the word knowledge tasks (Table 8).

Table 6

English Language Word-Knowledge Test
Percentage of Correct Response (N=71)

Item	N	Percentage
Fruits		
Banana	34	47.88
Apple	67	94.37
Orange	58	81.69
Mango	16	22.54
Animals		
Dog	55	77.46
Cat	64	87.32
Elephant	57	80.28
Tiger	37	52.21
Furniture		
Chair	33	46.48
Table	23	32.39
Bed	16	22.54
Lamp	25	35.21
Action		
Walking	19	26.76
Eating	29	40.85
Running	35	49.30
Sitting	30	42.25

Table 7

ANOVA among the different age-groups of Malay children
on English Word-Knowledge

Age-group	N		Fruits	Animals	Furniture	Action
4Y - 4Y5M	11	X SD	9.09 (1.76)	10.09 (2.47)	7.55 (1.92)	8.36 (1.69)
4Y6M - 4Y11M	21	X SD	8.86 (1.71)	10.38 (1.80)	7.45 (1.94)	7.05 (2.84)
5Y - 5Y5M	17	X SD	9.94 (1.92)	10.82 (1.88)	8.18 (3.19)	8.65 (3.30)
5Y6M - 6Y+	22	X SD	10.05 (1.36)	10.77 (1.74)	8.45 (2.81)	9.00 (2.53)

Table 7

English Language Word-Knowledge Test
T-Test between Malay and Non-Malay Children

Tasks/Item	Malay (N=71)		Non-Malay (N=71)		t-value
	Mean	SD	Mean	SD	
Fruits	9.52	1.72	9.46	3.0	0.18 (-)
Animals	10.56	1.9	9.90	2.3	1.86 (-)
Furniture	7.94	2.54	7.94	3.05	0 (-)
Action	8.24	2.8	8.19	3.36	0.08 (-)

(-) Not significant

Table 8

English Language Word-Knowledge
T-Test between Malay and Non-Malay Children
from different Kindergarten Centres

Tasks/Item	Malay (N=71)		Non Malay (N=71) (other centres)		t-value
	Mean	SD	Mean	SD	
Fruits	9.52	1.72	10.64	1.53	-4.12(++)
Animals	10.56	1.90	11.20	1.33	-2.31(+)
Furniture	7.94	2.55	10.01	2.62	-4.77(++)
Action	8.24	2.80	10.76	2.39	-5.79(++)

(++) P > 0.0001

(+) P > 0.02

3.1 Verbal Fluency (Malay)

The result of this test showed certain similarities with the test on word-knowledge (Malay). The overall performance of the Malay children in verbal tasks are quite high with 42.25% of them attaining the highest level of fluency (level 6) and 25.35% attaining level 4 fluency. The frequency distribution of subjects attaining level 5 across the 4 age-groups showed a higher percentage of the older children attaining this level (Table 9). This trend is expected.

3.2 The performance of the different age-groups of Malay children in the Malay Language verbal fluency test is obtained through analysis of variance (Table 10). The result indicated a markedly significant difference ^{between} age groups. ($P < F = 0.0001$). A more detailed comparison (Table 11) showed that this was true for all the different age-groups except for those between the age-group of (4Y-4Y5M) - (4Y6M-4Y11M) and (5Y-5Y5M) - (5Y6M-6Y+), where the differences between the mean obtained are not significant. This result inferred that the older children performed significantly better than the younger children and the larger the age difference the larger the difference in their performance.

3.3 A comparative analysis with non-Malay children showed that the verbal performance of the non-Malays whether they come from the same centres as the Malay children or not, is lower than that of the Malay children. This is indicated in Table 12. The Malay children obtained the highest mean, 4.38) as compared to 3.76 for non-Malay children from the same centres and 3.18 for non-Malay children from the different centres. The t-value on the differences in second language verbal performance between the Malay and non-Malay children from different centres is at 4.37, significant at 0.0001 level.

Table 9

Frequency Distribution of the Malay Language Verbal Fluency Test of Malay children acrosss Age-groups

	Levels of Fluency				
	1	2	3	4	5
4Y -4Y5M (N=21)	1 (9.09)	2 (18.18)	4 (36.36)	3 (27.27)	1 (9.09)
4Y6M - 4Y11M (N=21)	0 (0)	6 (28.57)	6 (28.57)	7 (33.33)	2 (9.52)
5Y - 5Y5M (N=17)	0 (0)	0 (0)	2 (11.76)	4 (23.53)	11 (64.71)
5Y6M - 6Y+ (N=22)	0 (0)	0 (0)	2 (9.09)	4 (18.18)	16 (72.73)
Total (N=71)	1 (1.4)	8 (11.26)	14 (19.72)	18 (25.35)	30 (42.25)

No. in bracket represent percentages

Table 10

ANOVA of the different age-groups of Malay Children in Malay Language Verbal Fluency

Age-groups	N	Mean	SD	F-value
4Y - 4Y5M	11	3.18	1.33	
4Y6M - 4Y11M	21	3.33	1.20	
5Y - 5Y5M	17	5.18	1.19	
5Y6M - 6Y+	22	5.36	1.09	16.86 **
Total	71	4.38	1.53	

** Significant at 0.0001

Table 11

Comparison of the different age-groups of Malay children
in Malay Language Verbal Fluency

	Difference between Mean	P > 0.05
(4Y-4Y5M) - (4Y6M-4Y11M)	-0.15	not significant
(4Y-4Y5M) - (5Y-5Y5M)	-2.0	significant at 0.05
(4Y-4Y5M) - (5Y6M-6Y+)	-2.18	significant at 0.05
(4Y6M-4Y11M) - (5Y-5Y5M)	-1.84	significant at 0.05
(4Y6M-4Y11M) - (5Y6M-6Y+)	-2.03	significant at 0.05
(5Y-5Y5M) - (5Y6M-6Y+)	-0.18	not significant

Table 12

T-Test on L2 Verbal Fluency between
Malay and Non-Malay children

Groups	N	Mean	SD	DF	t-value	P > t
Non-Malay (same centres)	71	3.76	1.3	1.38	2.62	0.09
Malay	71	4.38	1.53	-		
Non-Malay (different centres)	71	3.18	1.73	1.38	4.37	0.0001

4.1 Verbal Fluency (English)

As expected, the Malay pupils' performance in English verbal fluency was lower than for the same tasks administered in the Malay Language. None of the children reached the highest level of fluency which was defined as children who used mainly complete and grammatically correct sentences. Only 4.23% of pupils reached level 4. There are children who are able to talk about the picture or topic of interest with the help of prompt questions, whose articulation is fairly clear; and who used mainly simple sentences, although grammatical errors may be quite frequent.

11.26% of pupils reached level 3 which is for pupils who are able to say something of relevance about the picture with the help of prompt questions. These children used mainly short phrases rather than complete sentences.

21.13% of Malay children can only speak in one or two-word utterance in English while more than half could not even do so (Table 12). There seemed to be no clearly defined pattern of response in this task across the different age groups although there is a higher percentage of the older children performing better at level 3 and 4.

4.2 An analysis of variance for the four age groups of Malay children was performed to find out whether there is any significant differences in the mean obtained by the groups (Table 14). The result of analysis showed that there is a significant difference in the means obtained by the four groups, the F value obtained is 2.83 significant at 0.04 level. A closer comparison of the performance of each group, however, indicated that this significant difference existed only for the 4Y6M - 5Y5M group, informing that this age range might be the critical age for acquiring verbal skill in second language.

4.3 A comparison of the mean level of fluency in English between the Malay children and the 2 groups of non-Malay children indicated a similarity of performance between the Malay children and the non-Malay children who came from the same type of kindergartens. The t-value obtained for the variance between these two groups is only -1.88 with non-Malay group attaining the higher level, but this is not significant. On the other hand the mean obtained by the non-Malay children from different centre-type of kindergartens are very much higher, at 3.17, with a t-value of -7.54, significant at 0.0001 level (Table 14).

Table 13

Frequency Distribution of the English Language
Verbal Fluency task of Malay children across age-groups

	Levels of Fluency				
	0	1	2	3	4
4Y -4Y5M (N=11)	2 (18.18)	5 (45.45)	3 (27.27)	1 (9.09)	0 (0)
4Y6M - 4Y11M (N=21)	3 (14.29)	15 (71.43)	2 (9.52)	1 (4.76)	0 (0)
5Y - 5Y5M (N=17)	6 (35.29)	1 (5.88)	6 (35.29)	2 (11.76)	2 (11.76)
5Y6M - 6Y+ (N=22)	8 (36.36)	5 (22.73)	4 (18.18)	4 (18.18)	1 (4.55)
Total (N=71)	19 (26.76)	26 (36.62)	15 (21.13)	8 (11.26)	3 (4.23)

Table 14

ANOVA of the Different age-groups of Malay children
in English Language Verbal Fluency

Age-groups	N	Mean	SD	F-value
4Y - 4Y5M	11	1.45	0.7	
4Y6M - 4Y11M	21	1.19	0.5	
5Y - 5Y5M	17	1.9	1.03	
5Y6M - 6Y+	22	1.7	0.95	
Total	71	1.56	0.86	2.83 *

** Significant at 0.04

Table 15

Comparison of the different age-groups of Malay children in English Language Verbal Fluency Test

Age-group Comparison	Difference between Mean	
(4Y-4Y5M) - (4Y6M-4Y11M)	0.26	not significant
(4Y-4Y5M) - (5Y-5Y5M)	-0.49	not significant
(4Y-4Y5M) - (5Y6M-6Y+)	-0.23	not significant
(4Y6M-4Y11M) - (5Y-5Y5M)	-0.7507	+ significant
(4Y6M-4Y11M) - (5Y6M-6Y+)	-0.4913	not significant
(5Y-5Y5M) - (5Y6M-6Y+)	0.26	not significant

Table 14

T-Test on English Verbal Fluency between Malay and Non-Malay children

Groups	N	Mean	SD	DF	t-value	P > t
Non-Malay (same centres)	71	1.92	1.32	138	1.88	0.06
Malay	71	1.56	0.86	-	-	-
Non-Malay (different centres)	71	3.17	1.58	138	-7.54	0.0001

5 Correlation between Malay and English Verbal Fluency Test

Our earlier finding had indicated a significant by better performance in Malay than in the English verbal fluency test. A correlation between these two test among the different age-groups of Malay child intending giving us a clearer picture of the relationship between these bilingual task, failed to show any significant correlation between these two tasks for any age group except for the 5 year 6 months figure of 0.3 recorded a level of significance greater than 0.05. However a positive significant correlation is observed for the whole sample. This revealed that there is a greater likelihood for children who are more fluent in Malay also to be more fluent in English and vice-versa (Table 15).

Table 15

Correlation between Malay and English Verbal Fluency Task among Malay children

Age group	N	Malay (Mean)	English (Mean)	Pearson R
4Y - 4Y5M	11	3.18	1.45	0.12
4Y6M - 4Y11M	21	3.33	1.19	0.14
5Y - 5Y5M	17	5.97	1.94	0.16
5Y6M - 6Y+	22	5.36	1.68	0.30 *
Total sample	71	4.38	1.56	0.32 *

* P > 0.05

6 Listening Comprehension (English)

6.1 The result of this test showed a certain similarity with the English Verbal Fluency test. In both tasks the Malay pupils performed well below average. On overall performance of below 50% successful was recorded for all the six items tested, even though in determining the ability to comprehend the story read,

a certain laxity was provided for (correct answer given in Malay was coded as successful). In Table 18, it could be seen that response to Item 3 which is the weakest item, recorded a success rate of only 21.13%, and even for the best item, Item 2, the success rate was only 36.62%.

- 6.2 Each subjects' performance in all the six items were then collapsed to give an overall global picture of their performance in this task. An analysis of variance based on this figure was performed, but the difference in the means obtained for each age-group was found to be not significant (Table 19). This inferred that regardless of the age of the children, an overall weakness in listening comprehension prevailed.
- 6.3 The global performance of this pre-school Malay children was then compared with the performance of the two groups of non-Malay pupils, that is those from the same type of kindergartens as the Malay children and those of other kindergarten type.
- A similar pattern of performance with the English Verbal Fluency Test was observed. Results of the t-test procedure showed that the performance of this pre-school Malay children is very much closer to that of the non-Malay pupil from the same centres. The t-value obtained for these two groups was -0.97 indicating no significant difference in the means obtained for the two groups (Table 20).
- 6.4 In contrast the t-test administered for the Malay and non-Malay children coming from different kindergarten centres revealed a markedly significant difference in performance with the non-Malay group scoring the higher means. The t-value obtained, -5.56 is significant at 0.0001 level (Table 20).
- 6.5 A strong correlation between this task and the English Verbal Fluency task is also in evidence; among the Malay sample, correlation between these two tasks is 0.44, among the non-Malay of the same centres, 0.57 and among the non-Malay of different centres, 0.63. Indirectly this also indicated the reliability of these two tasks.

Table 18

Listening Comprehension

Percentage successful

Age-group	Items					
	1	2	3	4	5	6
4Y -4Y5M (N=11)	0 (0)	2 (18.18)	2 (18.18)	2 (18.18)	3 (27.27)	2 (18.18)
4Y6M - 4Y11M (N=21)	1 (4.76)	5 (23.81)	3 (14.29)	4 (19.05)	6 (28.57)	4 (19.05)
5Y - 5Y5M (N=17)	6 (35.29)	7 (41.18)	4 (23.53)	5 (29.41)	6 (35.29)	5 (29.41)
5Y6M - 6Y+ (N=22)	8 (36.36)	12 (54.55)	4 (18.18)	4 (18.18)	9 (40.91)	3 (13.64)
Total (N=71)	15 (21.13)	26 (36.62)	13 (18.31)	15 (21.13)	24 (33.80)	14 (19.72)

Table 19

ANOVA of the Different Age-groups of Malay Children
in Listening Comprehension (English)

Age-groups	N	Mean	SD	F-value
4Y - 4Y5M	11	10.73	2.9	not significant
4Y6M - 4Y11M	21	9.67	3.35	
5Y - 5Y5M	17	10.52	4.68	
5Y6M - 6Y+	22	11.18	4.68	

English Listening Comprehension Test

T-Test between Malay and Non-Malay children

from the same and different kindergarten centres

Groups	N	Mean	SD	t-value	P > t
Non-Malay (same centres)	71	11.17	4.49	-0.97	0.33
Malay	71	10.51	3.55	-	-
Non-Malay (different centres)	71	14.11	4.16	-5.56	0.0001