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Short Communications

**Establishing Performance Indicators from the User Perspective as
Tools to Evaluate the Safety Aspects of Urban Parks in
Kuala Lumpur**

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ABSTRACT

In the excitement of transforming Malaysia as Garden Nation through planting trees and establishing public parks around the Federal Territory of Kuala Lumpur, special attention should be given particularly in providing a safe urban environment. This is in line with the National Urbanisation Policy and Kuala Lumpur Structure Plan 2020. However, this can not be implemented without setting measurable standards of quality. Therefore, a survey was conducted to develop performance indicators from the safety aspect for the urban parks in Kuala Lumpur. A total of 420 park users from three urban parks of Kuala Lumpur were randomly interviewed based on a detailed questionnaire designed. Fifteen indicators were developed and these were further grouped into three strategies according to the "Safe City Programme": public awareness, physical planning and design and target hardening.

Keywords: Crime, environmental psychology, Garden Nation, green space, safe city

INTRODUCTION

Parks and green spaces should be at the centre of the revitalization of our towns and cities because they are great assets for the urbanites. This can be seen from the rapid changes in the attitudes of the urban residents towards the appreciation of green elements in the cities. Indeed, the UN-World Health Organization recommends at least 9 m² of urban green space per capita to mitigate a number of undesirable environmental effects and provide other benefits (Deloya, 1993). Apart from environmental services, green spaces provide social and psychological services, which are of crucial significance for the liveability of modern cities and the well-being of urban dwellers (Chiesura, 2004). This

is true particularly in the Western world, where the social and cultural values of green spaces are well documented.

Apart from the many positive benefits and meanings people gain from green spaces, people may also have negative perceptions. Many people fear natural areas for safety reasons. There are existing sites which are underused, partly because they are often seen as threatening places where crimes frequently occur (Jacobs, 1961). Research also shows that natural areas being perceived as scary, disgusting and uncomfortable (Bixler and Floyd, 1997). Similarly, parks are also perceived as risky when the sites are more densely vegetated, particularly when the vegetation is not apparently

maintained (Schroeder, 1989; Michael and Hull, 1994), while crime is often cited as a reason to avoid densely wooded areas (Talbot and Kaplan, 1984). Parks are also less liked when perceived to be the settings for drinking, drug use, crimes, teenage hangouts, rowdy behaviour and clashes with rangers (Schroeder, 1989). These reputations discourage many potential site visitors from using and enjoying available recreation resources. In addition, the public are also afraid of becoming the victims of physical or sexual assaults, robbery or bullying and intimidation from young people in the woodland (Burgess *et al.*, 1988; McNaghten and Urry, 2000; Jorgensen *et al.*, 2007). This may be true because safety and security is one of the six human needs besides physiological (e.g. food and shelter), affection, belonging (the need to belong to a group or community), esteem (the need to be accepted), self-actualization (fulfilment of potential), and cognitive-aesthetic (Maslow, 1954). Meanwhile, the presence of substandard facilities is also considered a source of danger in a park (Sanesi and Chiarello, 2006). The safety aspect in urban parks, particularly on the facilities, should also be considered as a part of the performance or quality of any parks in order to foster a safer environment. However, this does not mean that parks are always not safe or are crime-prone.

Cities should also initiate strategies, such as improved lighting, safe urban design, street safety cameras, city maintenance, community safety education and drug education plan, to produce a safer place. In Kuala Lumpur, the initiative to provide a safe and quality urban environment was discussed in detail in the National Urbanisation Policy (2006) and Kuala Lumpur Structure Plan 2020 (2004). The occurrence of crimes in Malaysia is comparatively small compared to other developed nations (Yong and Kho, 2004). Nevertheless, recent public concerns and outcry of snatch thefts and rape cases have prompted the government to launch "Safe City Programme" in Malaysia. The objective of the programme is to work with police and other city stakeholders to promote, develop and implement initiatives that were designed to prevent crimes

against the society and anti-social behaviour, as well as to minimize the fear of crimes in the city (Lam, 2000).

In the excitement of transforming Malaysia as a Garden Nation through planting trees and establishing public parks around the Federal Territory of Kuala Lumpur, special attention should also be given, particularly in providing a safe urban environment. Therefore, it is important to set appropriate targets and measurable standards to achieve this aim. Thorén (2000) developed a method called, "the green poster", to evaluate the sustainability of urban green structure for the city of Tønsberg, Norway. This method has the advantage to provide both numerical as well as visualized picture of the situation. Meanwhile, Coles and Caserio (2001) suggested a set of social criteria and indicators to measure the supply and quality of green spaces. De Ridder *et al.* (2004) conducted a preliminary study to develop a methodology to be used for evaluating the role of green space and urban form in alleviating the adverse effects of urbanization, which mainly focuses on the environment, while taking into account the socio-economic aspect at the same time. For instance, Balram and Dragičević (2005) used GIS as a tool to assess green areas. Furthermore, Tyräinen *et al.* (2007) developed a tool in mapping the social values of open space in Stockholm, which was later used as green-area planning tool. However, such studies on green space assessment have not been conducted in Malaysia.

It is timely to have a tool to assess the quality of green space in order to create a liveable park for the public. This was also clearly stated under the Kuala Lumpur Structure Plan 2020 (KLSP 2020) which indicated that the community facilities provided by Kuala Lumpur City Hall (DBKL) are to be designed and constructed to a high level of quality of provision and the facilities provided shall commensurate with the best achievable standards. Apart from that, DBKL shall ensure that new and existing community facilities (which include urban parks) for which it is responsible are properly maintained at all times (KLSP 2020, 2004). In

line with the National Urbanisation Policy and Kuala Lumpur Structure Plan 2020 towards creating a safer urban environment, the author conducted a preliminary study to develop performance indicators to be used to evaluate urban parks in Kuala Lumpur from the safety aspect. Such measurement is fundamental to the development of public parks and to monitor continuous performances by DBKL. This study aimed to reveal how park users felt about their safety and security while in the park and to develop performance indicators to evaluate the safety aspect of the urban parks in Kuala Lumpur, from the users' perspective.

MATERIALS AND METHODS

Samples-sites

The urban parks in this study are located in Kuala Lumpur. These include *Taman Tasik Permaisuri* (Permaisuri Lake Garden), *Taman Tasik Perdana* (Perdana Lake Garden) and *Taman Tasik Titiwangsa* (Titiwangsa Lake Garden). The selection of the parks was based on the definition of urban parks given by the Planning Standards for open space and recreation (Planning Standards: Open Space and Recreation, 2002). According to this Planning Standard, an urban park requires an area between 40-100 hectares (100-250 acres) within 0.5 km or ½ hour journey from and should be located in an urban centre. In addition, urban parks should be accompanied by recreational facilities such as fields, courts, sport complex, swimming pool, golf driving range, children's playground, picnic and camping area, water sports, amenity forest and gardens, *wakaf* or *surau*, public toilets and telephones, lodging, shops and stalls, parking for cars and busses, and bus stop.

The study population consisted of park users from these parks. As there were no data available on the number of visitors/users to these parks for the present study, the sample size was therefore determined using the following formula:

$$n = \frac{p(1-p)}{(s)(s)}$$

where:

n = sample size

s = standard error

p = proportion of the population having the characteristics of interest (variation)

Babbie (1992) suggested the use of a statistical method whereby a sample size is influenced by confidence level (standard error) and variance. Using the above formula, the sample size was derived based on the following assumptions: 95% confidence level, the standard error was 2.5% (0.025), and since the variance in the population was unknown, the highest possible variance was therefore assumed. The highest proportional variance occurred when 50% of the sample possessed the characteristic of interest and the other 50% did not have such characteristic. Based on these assumptions, the minimum sample size for the study is:

$$n = \frac{0.5(0.5)}{(0.025)(0.025)} \\ = 400 \text{ respondents}$$

Therefore, the minimum 400 samples were equally selected from all the parks, and these would be equivalent to 133 samples for each green area. However, the researcher decided to interview 140 samples from each park and this amounted to a total of 420 samples, which satisfied the minimum sample size suggested by Babbie (1992).

Data Collection Procedure

A survey was conducted from September-November 2006 at all the three urban parks. The survey method, i.e. a detailed questionnaire was designed to interview users within the park in which they felt at ease, based on a random sampling. The questionnaire was designed to reveal how the park users felt about their safety and security while in the parks and to identify the aspects that the city hall needed to look into in order to enhance safety and security of the parks' users. Thus, the face-to-face approach was utilized. The data are

important in upgrading the quality of urban parks, particularly from the safety aspect. Therefore, interviews were conducted by graduate students from Universiti Putra Malaysia (UPM) undergoing their two-month practical training at Forest Research Institute Malaysia (FRIM). Prior to the interviews, each of these student interviewers was briefed by the author on the interview procedures. The interviewers began by asking the respondents about their

demographic information and their visits to the park (e.g. how often do they visit the park, etc.). Visitors at each park were surveyed on-site on both weekdays and weekends in the morning (7:00a.m.–11.00a.m.), afternoon (11:00a.m.–3.00p.m.) and evening (3:00p.m.–7:00p.m.).

It is important to note that the interviewers did not use the term ‘performance indicators’ during the survey, mainly because it was thought park users might not have a good understanding

TABLE 1
Frequencies for all study variables

Variable	Number of cases	%	Variable	Number of cases	%
Study variable			Study variable		
Park visitation			Race		
Daily	3	5.2	Malay	330	78.6
4-6 times a week	3	1.4	Chinese	62	14.8
2-3 times a week	7	16.4	Indian	26	6.2
Once a week	25	28.6	Others	2	0.5
1-3 times a month	34	19.8			
Seldom than once a month	68	28.6			
Time of day			Career		
Morning	211	50.2	Government	55	13.1
Afternoon	8	1.9	Private	143	34.0
Evening	200	47.6	Own business	41	9.8
Night	1	0.2	Student	162	38.6
			Others	19	4.5
Transportation mode			Qualification		
Car/Van	281	67.2	Certificate	140	33.3
Motorcycle	125	29.9	Diploma	35	8.3
Taxi	2	0.5	Bachelor	186	44.3
Bus	2	0.5	Masters	43	10.2
Bicycle	7	1.7	Doctorate	4	1.0
Others	1	0.2	No formal education	12	2.9
Gender			Safe		
Male	254	60	No	14	3
Female	166	40	Yes	406	97

of that particular term. Instead, a much simpler phrase, such as ‘how to improve the safety aspect of our urban parks in Kuala Lumpur?’, was used. A structured interview protocol was developed for the in-park interview to ensure uniformity of coverage across the interviewers. The interviewers began by asking the visitors questions about their visits to the park (e.g. how often do they visit the park, etc.). The visitors were then asked to rate the importance of the safety aspect, which the city hall needs to take into account, using a 5-point numerical rating scale (1=not important, 2 = slightly important, 3 = moderately important, 4 = very important and 5 = extremely important). The interviewer concluded by requesting additional descriptive information (e.g. marital status) from the participants.

Data Analysis

The results which dealt with the performance indicators, to improve the quality of urban parks in Kuala Lumpur from the safety aspect, were compiled and analysed using the SPSS statistical

software. For this study, the data were analysed using the descriptive statistics such as means and frequency tabulation.

RESULTS AND DISCUSSION

Park Usage

Table 1 provides a summary of the descriptive statistics for all the study variables. The majority of the park visitors were men (60%) and they are Malays. The respondent’s age ranged from 17-62 years old, and most of them between were between 17-30 years old. Meanwhile, most of the park users visited the parks mostly in the morning (50.2%) or evening (47.6%) to engage in physical activities, such as jogging and walking (*Fig. 1*). This may be paralleled by those pertaining to employment status. Individuals who were not employed outside the home tended to visit in the morning and during weekdays. This is in contrast to individuals who were employed outside the home tended to visit the parks in the evening and during weekends. Indirectly, parks in Kuala Lumpur do play a vital role in the health and well-being of the society.

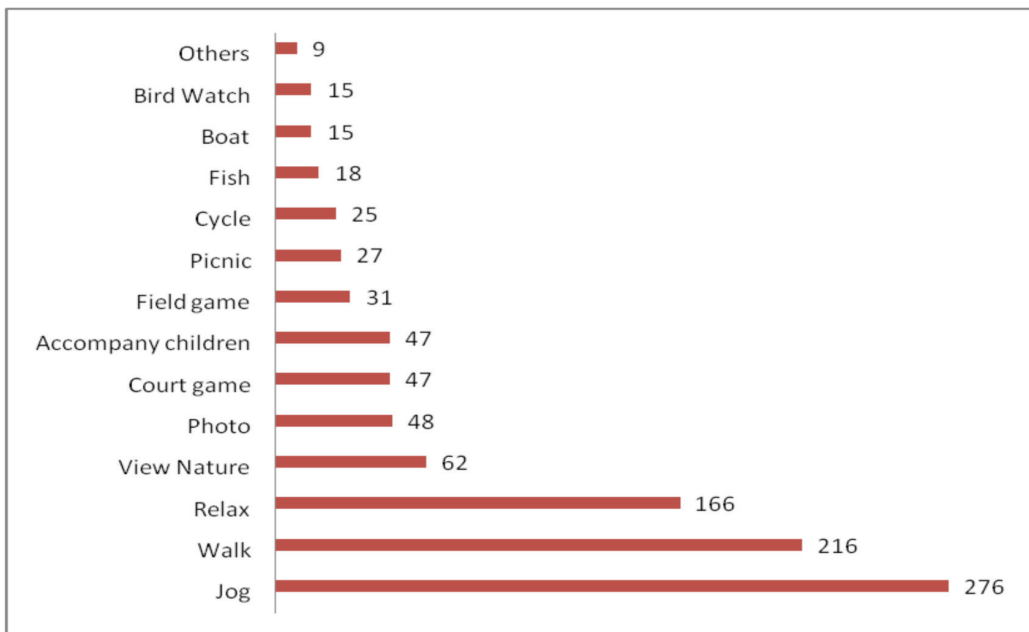


Fig. 1: Park user activities in Kuala Lumpur urban parks

TABLE 2
Mean importance rating by the park users of the performance indicators for safety aspect (n=420)

Performance indicators	Mean	Std. deviation
Pathways (e.g. no cracks, suitable for disable people)	4.84	.02
Play equipments	4.81	.02
Landscape treatment (e.g. hazard trees, grass not maintained, species selection, maintenance)	4.80	.02
Improved visibility of public toilets/pathways	4.80	.02
Security guards	4.74	.03
Security equipments (e.g. CCTV and Audio visual TV)	4.61	.04
Anti-social activities (e.g. graffiti, vandalism)	4.45	.04
Improved lighting	4.41	.03
Locking devices for motorcycles	4.40	.04
Setting-up safety and crime awareness signage	4.36	.03
Construction of bollard	4.21	.03
Brochures (Educational information)	4.17	.04
Setting-up public phones in parks	4.14	.03
Safety mirrors or reflectors	4.07	.03
Lockers for park users	3.99	.05

Note: Rating of safety and security importance: (1=not important, 2 = slightly important, 3 = moderately important, 4 = very important and 5 = extremely important)

In addition, majority of the park visitors (97.1%) prefer driving to the parks. About 97% of the respondents claimed that they felt safe to be in the parks in Kuala Lumpur. Only 3% stated that they felt unsafe because of snatch theft. However, the respondents identified highly on the importance of the safety elements which are limited to physical aspect. Performance also scored highly on the importance of the performance indicators from the safety aspect. This shows that the respondents want DBKL to take serious consideration details such as fostering better safety facilities and also continuous security at the parks. This is in accordance to the objectives of the Kuala Lumpur Structure Plan 2020 (KLSP 2020) and National Urbanization Policy, i.e. to provide a clean, pleasant and safe living environment and access to high quality community and cultural facilities.

Performance Indicators

As for the performance indicators, a total of 15 indicators were identified and these were further divided into three sectors (*Fig. 2*), following the sectors which were endorsed by the National Council for Local Government for the "SAFE CITY" Programme in October 2004. All these indicators were valued very high, i.e. from 3.99 to 4.84 (Table 2). Target hardening strategies include the facilities which are needed or which may enhance the safety aspect of a park. In many cases, the park facilities are adequately provided but they are underutilised. The KLSP 2020 identified this situation as due to inadequate maintenance, vandalism and poor accessibility, and in particular, children's playgrounds, soccer fields, and sports facilities are mostly affected. DBKL should not only be responsible in providing facilities, but in maintaining these facilities as well. By maintaining the facilities,

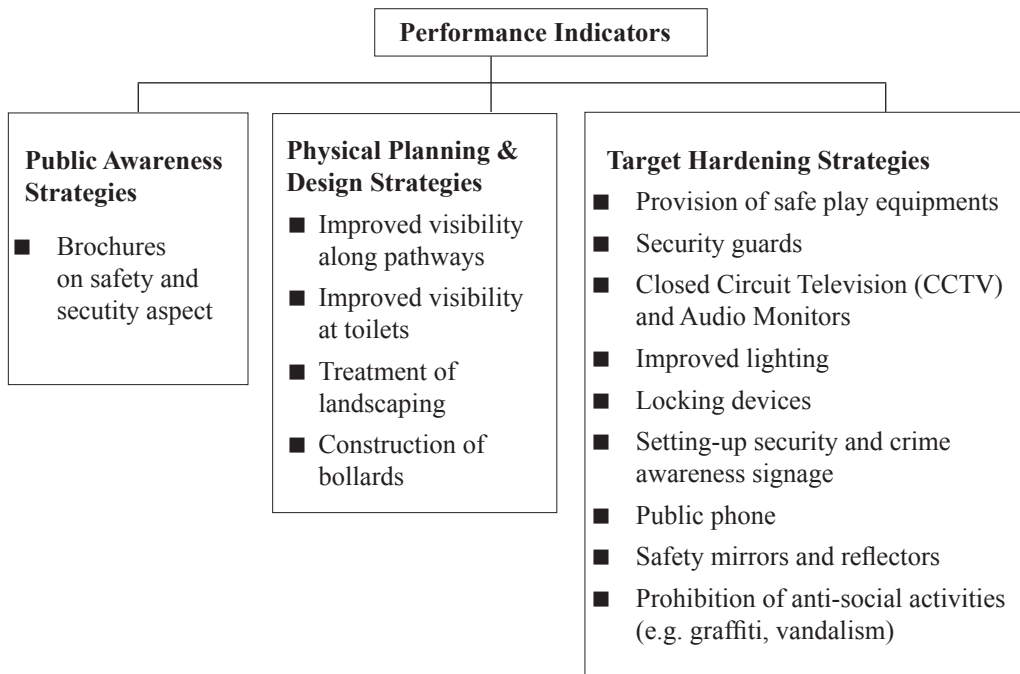


Fig. 2: Classification of the developed performance indicators according to safe city programme sectors

the quality of the parks, particularly from the safety aspect, could therefore be improved.

Physical planning and design strategies involve a development of the structures or design which makes a place safer. This involves design of the building, pavement or even planting design. In total, this helps the planning process of a park. Urban design addresses both the functional and aesthetic aspects of the city's built environment. Urban design should not only be aesthetically pleasing but also provide a safe environment through proper environmental design, such as guidelines on landscaping treatment. This has been stated clearly under the KLSP 2020, where DBKL shall draw up an Urban Design Framework, together with a comprehensive set of Urban Design Guidelines, to ensure public safety (KLSP 2020, 2004).

Finally, through the public awareness strategies, DBKL has an important role in disseminating information to the public on the safety and crime prevention measures. One way of doing this is through brochures. Increasing

the public awareness and involvement on safety are clearly stated under the National Urbanization Policy (2006). However, these involve certain challenges, such as public awareness requires a lot of elements to ensure its successful implementation. The selection of the target groups, methods and strategies used for campaign activities, getting the right implementers and promoters and providing appropriate campaign materials are some of the elements regarded as prerequisite in implementing public awareness (Moktar Yassin *et al.*, 2006).

This study has developed the performance indicators from the users' perspective. This is because park provisions are meant for public use, and thus, their needs should also be incorporated in the development process of parks. Torkildsen (1992) highlighted that the performance of parks management does not only depend on the administrative relationship, which is between the central government, state government, and local authority, but it should also include the

consideration for users' needs. In addition, majority of the local authorities have actively been implementing Local Agenda 21 that focuses on the public as the main stakeholder for the city. More importantly, the information derived from this study would be a great benefit for DBKL in upgrading the safety aspects.

CONCLUSIONS

This study has established performance indicators that could be used in assessing the quality of urban parks in Kuala Lumpur from the safety aspect. However, further investigations need to be conducted by expert groups in Malaysia, such as town planners, landscape architects, architects and urban crime personnel, before implementing it on ground. Apart from this, the developed indicators should also be tested on these parks. With this in mind, the second phase of this study, involving experts' opinion on the performance indicators, will be conducted. A more comprehensive study with the help of the expert groups in this area, a complete set of performance indicators could be developed to assess the safety aspect in these parks. These indicators could be quantitatively assessed by giving a total score for individual parks. This would show the progress of each park. Therefore, the performance indicator is a tool which is specifically designed to highlight the achievement of a park or any green space from the management perspective, and in this case, from the safety aspect. This provides a better understanding for DBKL on the progress of the parks that are under their administrative and management.

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Implementation of Music in Government Preschools in Malaysia: Music Activities, Teachers' Perceptions and Teachers' Self-Efficacy

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ABSTRACT

In this paper, the implementation of music in government preschools is studied from three aspects, namely music activities, teachers' perception of the role of music in preschool education, and teachers' self efficacy in music teaching. A questionnaire, which was designed according to the local curriculum syllabus, as well as adapted parts of Wu's (1999) and Oreck's (2001) research instruments, was distributed to 138 preschool teachers in various districts in the state of Selangor, from which 96 valid responses were gathered. The findings revealed that the music activities carried out in preschool, from the order of the most frequently conducted, are group singing, music and movement, listening, sound exploration, and instrument playing. Meanwhile, 95.8% of the respondents conducted group singing daily, and only 28.1% conducted music and movement daily. More than 70% seldom or had never conducted sound exploration activities. Majority of the respondents perceived that music plays a role in personal and social development, music skills and knowledge development, classroom management, and other benefits. There are however disagreements by few on the aspects related to the importance of music in child development. The findings on teachers' self efficacy revealed that one-third of the respondents were not confident to conduct music activities in school. These findings reflected the background of the respondents, whereby 31.3% were untrained in preschool education and 92.7% others did not possess any relevant qualification for instrumental proficiency.

Keywords: Music, preschool, self-efficacy, implementation, curriculum

INTRODUCTION

In a society where traditional arts are vanishing alongside the process of urbanisation, school becomes the substitution for the community to impart the arts into children's growth, as well as to carry out the process of enculturation through the arts. However, the transition is not that simple. The arts, including music, are now put under a new social context called education. The change of environment, i.e. from community to school classroom, will affect the quality and mode of art creation and sharing by and for the children.

Research on the status of implementation of music in schools is necessary to identify the existing barriers to the transition mentioned, and to ensure music fully functions in the multiple areas in children's learning. The purpose of this paper is to study the implementation of music in preschools in Malaysia¹, onto which the National Preschool Curriculum has been implemented for its first three years since 2003, undoubtedly at a stage of adaptation. The number of new government preschools has escalated since 2000², and teachers have been given 'refresher courses' to attend to the new curriculum at newly opened schools³.

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Under the structure of the National Preschool Curriculum, music is part of the creative and aesthetic component⁴. The objectives of the component are to enable students to: (a) appreciate nature's beauty through creative performance, (b) use natural and recycled materials creatively, (c) express emotion creatively, and (d) value cultural heritage. In order to achieve these objectives, three main contents are identified for music, and these are: (1) music enjoyment or in original terms *menikmati muzik*, (2) singing or *nyanyian*, and (3) creative movement or *pergerakan kreatif*. Each of this is further divided into specific learning activities.

With respect to teaching approach, on the other hand, the curriculum suggests that a component can be taught through: (1) play, (2) thematic teaching, (3) integration with other component, or (4) application of ICT. Music is therefore to be taught both in separation, i.e. as a component by itself and in integration with other components.

There are various types of preschool in Malaysia. Preschools are run by either private bodies, associations, churches or the government, and they are conducted in Chinese, English, Tamil or in other languages. The government preschools, which are conducted in Bahasa Malaysia by principle, are created for all children irrespective of their cultural background and ethnicity. At present, it is however attended by mostly Malay children and taught by mostly Malay teachers⁵. Hence, in Government preschools, the homogeneity of students is high in terms of language, culture and religious background. The findings of this paper will therefore reflect the characteristics of this particular ethnic group.

The existing issues in music education in Malaysia include the public's low perception, and therefore the lack of appreciation, towards music and music education, the issue which was voiced by music educators in the Resolution of the First National Conference of Music Education declared in 2002⁶. In relation to this, the positioning of music and music education according to Islam's teaching is an issue which

has been constantly discussed by the society at large, and has received scholarly attentions through the works by Mohd Tahir and others (1996: 2006).

On the other hand, teacher's readiness and ability in teaching music have been raised both in the academic world and the society at large. Mah's research (2003) on the effectiveness of teacher training programmes revealed that more than 50% of his respondents, who were teacher trainees, did not have any formal education in instrumental skills prior to their entry into the teacher training programme. This is consistent with the government's survey (EPRD, 2000) on music teaching in primary school, which found that teaching competency was one of the shortcomings in the curriculum implementation, besides the lack of teaching resources and other concerns.

Meanwhile, review of relevant literature reveals the common music activities conducted in preschools. Among other, Wenerd (1989) reported six musical activities in preschools, in the order of the most frequently conducted, which are: singing, movement, listening, instrumental activity, improvisation of melodies, and sound exploration. The National Preschool Curriculum of Malaysia, on the other hand, listed three main contents for music; these are music enjoyment, singing and creative movement. Each of these contents has sub-items detailing the actual activities to be carried out in class. Apparently, all the activities listed by Wenerd above are covered in the National Preschool Curriculum, except for the 'improvisation of melodies'. However, the grouping of the actual music activities in the National Preschool Curriculum still lacks clarity. The sub-component for music enjoyment, for example, comprises a mixture of listening, sound exploration, and instrumental activities, while listening and song identification activities are included under the sub-component of singing. Hence, regrouping is necessary in order to analyze the music component in the NPC.

Beside the types of activity, the researchers have also looked into the use of musical instrument and equipment, as in the surveys

by Nardo (1996) and Temmerman (1998). In Malaysia, private early childhood music providers in Malaysia are reported to use audio tape, un-tuned percussion, song book, keyboard or piano, percussion and song charts in their music sessions (Liew and Lam, 2006).

As for the aspect of teachers' perception, Wu (1999), in investigating the attitudes of kindergarten teachers in Taiwan, found that music is perceived as a valuable learning tool that plays important roles in child development, is useful for classroom management, and is effective in motivating children to learn other subjects. How would the Malaysian preschool teachers then, coming from a different cultural and training background, perceive the role of music in preschool education?

As for the aspect of teaching competency, Oreck (2001) conducted a survey on teachers' self-efficacy, attitudes and personal characteristics, and covered a wide scope on the use of arts in teaching which encompassed dance, music, theatre, and visual arts. In his findings, teachers' self-efficacy was found to be more influential than other personal characteristics. To what extent, then, are preschool teachers in Malaysia confident and comfortable in leading musical activities in preschool?

In order to have a comprehensive understanding of the implementation of music in preschools in Malaysia, it becomes necessary to include both the matters related to the perception towards music and teacher competency as subjects of inquiry in the study. In view of the discussion thus far, a successful implementation of music in preschools would display the qualities of: (1) being dynamic and varied in music activities, (2) being conducted by teachers who understand the role of music in the development of a child in various aspects, and (3) teacher showing confidence in their ability to translate concepts of music education into actions in classroom effectively.

METHOD

Within the 269 government preschools in the Selangor state, there are 215 preschool teachers

who teach music. In this study, a technique of proportionate stratified sampling was employed to determine the sample size for this target population of 215. According to Krejcie and Morgan (1970), a sample of 135 and 140 was obtained from a population size of 210 and 220, respectively. By proportioning for a population size of 215, a sample size of 138 was calculated. Eventually, there were 96 respondents or 69.6% retrieval of completed questionnaires out of the 138 sets sent.

The questionnaire was designed according to the three variables sets, which are: (1) music activities conducted, (2) teachers' perception towards the role of music in preschool education, and (3) teachers' self-efficacy in music teaching. In view of the existing literature and the requirement of the National Preschool Curriculum, questions on music activities⁷ followed closely to the items stated in the NPC, with some additional items. In addition, 'music equipment used' and 'the amount of time devoted to music daily' were added into the questionnaire. Meanwhile, the questions on the second variable were mainly adapted from Wu's research (1999). The items in Wu's questionnaire on the roles of music were comprehensive. The perception towards the role of music in education in this questionnaire was asked based on the four aspects, namely (1) personal and social development, (2) musical knowledge and skills development, (3) classroom management, and (4) miscellaneous benefits. The questions on teacher's self efficacy were adapted from the instruments of Wu (1999) and Oreck (2001).

A pilot study employing 15 preschool teachers who were attending in-service training at Maktab Perguruan Bahasa Melayu Malaysia, Kuala Lumpur, was carried out. The contents of the questionnaire were reviewed based on the comments gathered. Reliability tests for measuring the homogeneity of the questionnaire items were computed using Cronbach's coefficient alpha. The reliability indexes for all variables had coefficients of 0.70 and above, for both the pilot study, as well as the final questionnaire.

After obtaining the permission to conduct research in schools from the Ministry of Education and the Education Department of Selangor, copies of the questionnaire were sent to the subjects through their respective headmasters. A total of 138 sets of questionnaire were sent to the subjects in various districts in the state of Selangor, including 16 in Gombak, 21 in Hulu Langat, 10 in Hulu Selangor, 16 in Klang, 10 in Kuala Selangor, 23 in Petaling, 14 in Sabak Bernam, and 10 in Sepang.

The data collected were coded and analyzed using SPSS version 13.0. A descriptive statistical analysis method, using frequency counts, percentages, mean, and standard deviations, was used to analyze the profile of respondents and all the variables of the research.⁸ Meanwhile, the Pearson product-moment correlation coefficient was used to determine the relationship between the variables, i.e. between the music activities and teachers' perception, as well as between the music activities and teachers' self-efficacy.

Respondents' Profile

Of the 96 teachers who responded to the questionnaire, majority (92.7%) were females (Table 1). All the respondents have undergone teacher training courses and have met the basic qualification of a teacher in government schools⁹. However, 31.3% of the respondents were not equipped with relevant training to teach in preschools. As for musical skills, only a few respondents (7%) have received substantial formal education in instrumental skills¹⁰, whereas 22% others who have attended in-service courses reported that the courses were rather limited to only music with creative movement. It is important to note that the majority (72.9%) of the government preschools in this study are located in the rural areas.

TABLE 1
Respondents' profile
(N=96)

Characteristic	Frequency	Percentage (%)
<i>Gender</i>		
Male	7	7.3
Female	89	92.7
<i>Professional qualification</i>		
Teacher Training Certificate	40	41.7
Teacher Training Diploma	53	55.2
Degree in Education/Teacher Training	3	3.1
<i>Specialization</i>		
Preschool	66	68.8
Other	30	31.3
<i>Qualifications of instrumental / Vocal competency</i>		
No	89	92.7
Yes	7	7.3
<i>In-service courses attended</i>		
No	74	77.1
Yes	22	22.9
<i>Location of school</i>		
Rural	70	72.9
Urban	26	27.1

RESULTS AND DISCUSSION

Music Activities Conducted in Government Preschools

The mean scores for each music component in the curriculum give the impression of a moderately high level of implementation of music, as shown in Table 2. As mentioned earlier, the categorization of the music activities in the National Preschool Curriculum lacks clarity, in which some of the names of contents do not reflect the exact activities. Hence, the results have to be reorganized according to the exact activities in each sub-component to gain a better picture of the implementation status of each sub-component. The reorganized results are presented in the following order: the amount of time devoted to music daily, the type of instrument and equipment used, singing and vocal activities, music and movements, listening, sound exploration and instrumental playing.

TABLE 2
Implementation of music according to the component listed in the national preschool curriculum (N=96)

Activities	Mean	Standard deviation
Music appreciation	3.28	0.57
Singing	3.56	0.50
Creative movement	3.98	0.57

Low (1.00-2.33), Moderate (2.34-3.66), High (3.67-5.00)

As the curriculum does not specify time allocation for music, time devoted to music in classroom varies. 83.3 % of the respondents spent between 10-20 minutes daily, while 7.3 % spend less and 9.4% spend more, as presented in Table 3. Meanwhile, the usage of music instruments and equipment is shown in Table 4. CDs, cassettes, video, TV, and un-tuned percussion were found to be the common equipment used, showing a high dependency on audiovisual equipment in the music activities conducted. Similarly, the dependency on auto

playback device is also apparent, implying live accompaniment using music instruments, except for the un-tuned percussion which is rare. As for musical instruments, mainly non-melodic percussion instruments, such as tambourine, ring bell, castanet, drum, *kompang* and double tick-tuck, were found to be commonly utilized.

TABLE 3
The amount of time devoted to music per day in classroom (N=96)

Time (minute)	Frequency	Percentage (%)
None	-	-
About 5	7	7.3
About 10	25	26.0
About 15	32	33.3
About 20	23	24.0
More than 20	9	9.4

Singing and Vocal Activities

Among the items grouped under singing and vocal activities (Table 5), group singing was reported to be the most frequently conducted activity. 95.8% conducted group singing once a week or more, while 58.3% practicing it daily. Singing with structured instruction is, however, less frequent.

Of the 58.3% who practiced group singing daily, only about half conducted group singing with structured instruction like ‘listen to children song and follow the melody’ (29.2%) and ‘singing with expression of feeling’ (30.2%). Based on the findings for the type of instrument used (Table 4), it is clear that singing was conducted either with auto playback music or without any accompaniment, since the usage of music instruments other than percussion was not reported.

Meanwhile, structured rehearsal and performance scored the lowest of the entire questionnaire. 15.6% of the teachers had never prepared children for any performance. On the use of music for utility needs, singing was used during the assembly, with 90.6% in the frequency of once a week and above. Among

the three items for utility needs, 5.2% stood out to have never conducted singing in any particular occasion like national day and the major yearly festivals of their respective society.

‘Vocal activities’ which refer to the usage of voice in ways other than the ordinary singing yielded a slightly lower count of frequency as compared to group singing. The frequency for weekly practice and above for ‘imitation with voice’ was 62.5% for inside the classrooms, and this was 66.7% for outside the classrooms, ‘making various sounds’ 62.6%, and ‘producing voice according to rhythm’ was 80.3%.

TABLE 4
Type of equipment used
(N=96)

Music equipment	Percentage (%)
CDs and CD player	96.9
Cassette tapes and player	95.8
Music video, VCR, Video recorder, TV	94.9
Non-melodic percussion instruments (tambourine, ring bell, castanet, drum, <i>kompang</i> , etc.)	93.9
Computer technology	51.7
Melodic percussion instruments (melodian, xylophones, etc.)	11.5
Recorder	10.4
Piano, organ or keyboard	4.2
Guitar	1.0

Although all the respondents had conducted singing in class, a portion of teachers only did it rarely or rather infrequently. In this context, ‘infrequently’ refers to more than once in a semester but less frequent than ‘weekly’ in the original questionnaire. In particular, 4.2% conducted group singing infrequently, 10.4% conducted ‘listening and trying to follow the melody of the song’ infrequently, and 19.8% conducted ‘singing with expression feeling’ infrequently. As for the vocal activities, the count for ‘infrequently’ marked between 12.5 to

36.5%, while 1.0 to 3.1% had never conducted such activities. The lower frequency for singing for utility needs is understandable, as this particular type of singing is normally conducted according to the occasions.

Music and Movement

Besides group singing, listening to music and doing free movement are the most frequently conducted activity, as shown in Table 6. The findings in this section reflect the level of technical demand among the items for music and movement, whereby an ascending order of score is observed for the column of ‘infrequently’ and descending for ‘everyday’. Rhythmic movements (or *pergerakan Bertram*, refer to doing structured movements as in aerobic exercises, etc.) stood out to be the most demanding activity, but only 12.5% of the teachers practiced it daily, weekly (63.5%), infrequently (20.9%) and had never done it (3.1%). Meanwhile, 12.5% to 20.9% of the respondents conducted music and movements infrequently. These are in contrast with the high score for the teachers’ perception of music’s role in enhancing psychomotor skills, an item to which 99% agreed (*see* Item 3, Table 10). Hence, the cause for the infrequent practice of music and movement lies in aspects other than the teachers’ perceptions.

Listening Activities

The teachers’ frequencies of conducting listening activities are shown in Table 7¹¹. Among the items, sound guessing was found to be practiced the least, with 49% of the respondents conducted it infrequently. As for the type of songs listened to, children’s songs were indicated to be the most frequently listened to, while patriotic songs, religious songs, *nasyid*, and popular songs were also played in the classroom. In general, listening activities were less frequent compared to group singing and music and movement, whereby a portion of the respondents reported that they had never conducted these activities at all.

TABLE 5
Singing and vocal activities in preschool
(N=96)

Items	Percentage (%)			
	Never	Infrequently	Weekly	Daily
<i>Group singing</i>	-	4.2	37.5	58.3
Listening to children songs and trying to follow melody of the song	-	10.4	60.4	29.2
Singing with expression of feeling as: Lively, Happy, Sad or Enthusiastic	-	19.8	50.0	30.2
<i>Singing for utility needs</i>				
Singing songs in preparation for birthday occasions	-	77.1	16.7	6.3
Singing songs in preparation for assembly events	-	9.4	57.3	33.3
Singing songs in preparation for national day and celebration events	5.2	57.3	18.8	18.8
<i>Structured rehearsal and performance</i>				
Singing and playing music in preparation for performance	15.6	60.4	18.8	5.2
<i>Vocal activities</i>				
Imitating sound heard in classroom using voice	1.0	36.5	40.6	21.9
Imitating sound heard outside classroom using voice	3.1	12.5	32.3	34.4
Making various sounds with voice like: Loud – Soft, Fast – Slow , High – Low	1.0	36.5	43.8	18.8
Producing voice according to rhythm of song heard	1.0	18.7	49.0	31.3

'Infrequently' refers to more than once in a semester, but less frequent than 'weekly' in the original questionnaire

Sound Exploration and Instrument Playing

Sound exploration was done through various means like listening, giving vocal response, making movements, and playing instruments. The four items for the 'vocal activities' discussed in Table 5 are by themselves sound exploration using voice as a medium. Listed in Table 8 are items for the sound exploration that was not included in any other session. As compared to the results for vocal activities in Table 5, sound exploration through knocking, scraping, snapping, and blowing had a lower frequency of implementation, whereby 45-59% of the respondents stated that they conducted these

activities infrequently and 11-31% others had never carried out them in their classes. This low percentage for sound exploration activities coincided with Wenerd (1989) who reported in her study of American preschools where sound exploration was found to be the least frequently conducted activity.

Just like sound exploration activities, instrumental activities were also less frequently conducted (Table 8), whereby 58.3 to 59.4% stated that they conducted them infrequently and 4.2 to 6.3% had never conducted them. This apparently contradicts with the results obtained for group singing, music, and movement and listening activities. In more specific, only

TABLE 6
Music and movement activities in preschool
(N=96)

Items	Percentage (%)			
	Never	Infrequently	Weekly	Daily
Listening to music and doing free movement	-	12.5	59.4	28.1
Listening to song and doing clapping, tapping or body movement according to rhythm	-	19.8	56.3	24.0
Listening to music and moving creatively according to beat	-	18.8	61.5	19.8
Listening to song and doing movement according to lyric of the song	-	19.8	60.4	19.8
Listening to song and doing rhythmic movement	3.1	20.9	63.5	12.5

'Infrequently' refers to more than once in a semester, but less frequent than 'weekly' in the original questionnaire

TABLE 7
Listening activities in preschool
(N=96)

Items	Percentage (%)			
	Never	Infrequently	Weekly	Daily
Producing voice according to rhythm of song heard	1.0	18.7	49.0	31.3
Imitating sound heard in classroom using voice	1.0	36.5	40.6	21.9
Imitating sound heard outside classroom using voice	3.1	12.5	32.3	34.4
With eyes closed and guessing act by listening to sound like: Snapping finger, Bell ringing, Table knocking, Opening or Closing door	3.1	49	37.5	10.4
Listening and guessing the melody of: children songs	5.2	23.9	58.3	12.5
patriotic songs	6.3	42.7	37.5	13.5
religious songs <i>nasyid</i>	8.3	47.9	38.5	5.2
popular songs	9.4	48	36.5	6.3

'Infrequently' refers to more than once in a semester, but less frequent than 'weekly' in the original questionnaire

TABLE 8
Frequency of sound exploration and instrumental activities
(N=96)

Items	Percentage (%)			
	Never	Infrequently	Weekly	Daily
<i>Sound Exploration</i>				
Exploring sound resulting from knocking and scraping activity	11.5	58.4	29.2	1.0
Exploring sound resulting from snapping activity	28.1	54.2	16.7	1.0
Exploring sound resulting from blowing activity	31.3	45.8	18.8	4.2
<i>Instrumental Activities</i>				
Exploring sound played by music equipment	6.3	58.3	33.3	2.1
Playing music percussion instruments according to beat	4.2	59.4	31.3	5.2
Utilizing material from environment to produce melody	27.1	54.2	15.6	3.1
Singing and playing music in preparation for performance	15.6	60.4	18.8	5.2

'Infrequently' refers to more than once in a semester, but less frequent than 'weekly' in the original questionnaire

TABLE 9
Perception towards the role of music in personal and social development
(N=96)

Items	Percentage (%)			
	Strongly disagree	Disagree	Agree	Strongly agree
Music can be used for personal development and improving self-esteem	-	2.1	66.7	31.3
Music can cultivate moral values among children	-	2.1	63.5	34.4
Music is important for complete development of a child	-	13.5	51.0	35.4
Music is a way to develop the child creativity	-	-	50.0	50.0
Music can help children learn language skills	-	2.1	54.2	43.8
Music can help children learn social skills like cooperation and sharing	-	3.1	52.1	44.8
Music can instill spirit of patriotism among children	-	-	54.2	45.8
Music can help children learn art	-	-	65.6	34.4

Mean = 3.37, Standard deviation = 0.36

35.0% explored and 36.5% played musical instruments at the frequency of once a week or more. Although these data are not shown in the table, 40.6% of the children would get to touch while 43.8% others played musical instruments once in every few weeks. This is a situation of instrumental learning, despite the high score of 93.9% who admitted the usage of un-tuned percussion in their classrooms, as presented in Table 4. Utilizing material from the environment marked the highest count for the category ‘never’ in this study, i.e. 27%.

Teachers’ Perception towards the Role of Music in Preschool Education

From the findings, the overall perception by the respondents towards the subject of music is positive, with an overall mean of 3.34 (Table 14), where majority supported all the statements listed in the questionnaire. There is, however, a

certain percentage of teachers (ranging from 1 to 17% given in Tables 9-12) who disagreed with some of the roles of music stated. Observations on each section are discussed below.

Music for Personal and Social Development

As shown in Table 9, most of the respondents agreed that music is useful in enhancing human skills, like creativity (100%), language (98%), and social skills (96.9%). Unanimous agreements were also achieved for the role of music in instilling patriotism and helping children to learn art. A mean of 3.37 obtained for this section indicated that the respondents generally had a positive perception towards the roles of music in personal and social development. Meanwhile, none of the respondents stated ‘strongly disagree’ for this particular section, 13.5% of them disagreed with the statement that music is important for a

TABLE 10
Perception towards the role of music in preschool for the development of music skills and knowledge
(N=96)

Items	Percentage (%)			
	Strongly disagree	Disagree	Agree	Strongly agree
Music can be used for the development of vocal responses	-	4.2	69.8	26.0
Music can be used for the recognition of dynamics in music	-	8.3	68.8	22.9
Music can be used for the development of psychomotor responses	-	1.0	61.5	37.5
Music can be used for the development of aesthetic sense	-	2.1	61.5	36.5
Music can be used for improving pitch discrimination and tonal memory	-	9.4	58.3	32.3
Music can be used for the development of affective responses in music	-	4.2	54.2	41.7
Music can be used for the learning of musical concepts	-	5.2	61.5	33.3
Music can be used for the development of meaningful responses to meter in music	-	6.3	59.4	34.4

Mean = 3.28, Standard deviation = 0.38

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TABLE 11
Perception towards the role of music in classroom management
(N=96)

Items	Percentage (%)			
	Strongly disagree	Disagree	Agree	Strongly agree
Music is a good way to change students' mood	-	-	32.3	67.7
Music can be used as a reward when the academics are completed	-	6.3	61.5	32.3
By including music, my class is better adjusted	-	2.1	59.4	38.5
Music helps to release stress in children	-	-	36.5	63.5
Music increases attention span	-	7.3	58.3	34.4
Music assists the child with repeated tasks	-	15.6	58.3	26.0
Music can establish a positive learning environment	-	2.1	56.3	41.7
Music helps to change children's energy level	-	6.3	57.3	36.5

Mean = 3.38, Standard deviation = 0.37

TABLE 12
Perception towards the role of music in miscellaneous benefits
(N=96)

Items	Percentage (%)			
	Strongly disagree	Disagree	Agree	Strongly agree
Music can be used for demarcation of time as an opening, transition, or ending	-	4.2	53.1	42.7
Music is recreational	-	-	60.4	39.6
Children have a right to learn about music	-	1.0	49.0	50.0
Music should be part of a personal education	-	10.4	67.7	21.9
Music motivates the children to learn about concepts and facts in other subjects	-	11.5	68.8	19.8
Music is fun for children	-	1.0	24.0	75.0
Music is for special occasions like birthdays, holidays, and celebrations	-	17.7	45.8	36.5
Music offers an opportunity to help learning of disabled students	-	5.2	62.5	32.3

Mean = 3.33, Standard deviation = 0.34

complete development of a child. This finding is striking as it contradicts with the widely accepted concept of child development in today's era, whereby music is regarded an effective means to develop all rounded skills of a child.

Music for Musical Development

This section consists of questions pertaining to the importance and relevance of promoting musical growth in preschool education. The responses reflect the teachers' awareness and understanding towards various aspects of musical growth. The result tabulated in Table 10 shows a mean of 3.28 for this particular section.

Unlike the other three aspects of perception, there is a consistent disagreement for all the items in this section, although the percentage is small. This could probably be due to the teachers' unfamiliarity towards the conceptual terms in music stated in the questions, as at least 30% had neither specialised in preschool education nor qualifications for instrumental skills. As such, terms that are shared with other

subject areas and hence more common like 'psychomotor response' and 'aesthetic sense' had the least misunderstanding, while other terms such as 'vocal response', 'dynamics', 'affective response', 'musical concept', 'meter', 'pitch discrimination' and 'tonal memory' did not seem to be well-understood by 4 to 9% of the respondents.

Music for Classroom Management

Table 11 shows the results obtained for music for classroom management. As stated, the majority of the respondents agreed with the role of music in classroom management, although there were disagreements concerning certain statements. Repeated task, which is essential for musical skills acquisition, was not associated with music by 15.6% of the respondents. Interestingly, the same percentage was obtained for teachers who had never prepared children for performance (see Table 5). This implies that to these respondents, music is yet to be recognised as an activity that requires active participation, as compared to

TABLE 13
Self-efficacy in music teaching
(N=96)

Items	Percentage (%)			
	Strongly disagree	Disagree	Agree	Strongly agree
I have confidence in my abilities in teaching music	-	30.2	61.5	8.3
I feel comfortable leading music activities	1.0	32.3	52.1	14.6
I feel that I have time to include music in the classroom schedule	1.0	9.4	79.2	10.4
I enjoy music with the children	-	5.2	69.8	25.0
I always enjoy music	2.1	14.6	61.5	21.9
I use various approaches in music instruction in a creative way	1.0	18.8	72.9	7.3
I feel that music in my classroom would not disturb other teachers and students	-	9.4	75.0	15.6
I have confidence to use music equipment to facilitate music activities	2.1	31.3	59.4	7.3

Mean = 2.93, Standard deviation = 0.40

TABLE 14
Overall mean and distribution of level of all variables
(N=96)

	Variables		
	Perceptions	Self efficacy	Music activities
Percentage (%)			
High	82.3	31	38.5
Moderate	17.7	66	61.5
Low	-	3.1	-
Mean	3.34	2.93	3.49

Low (1.00-2.33), Moderate (2.34-3.66), High (3.67-5.00)

TABLE 15
Result for the correlation with implementation of music
(N=96)

Variables	R	p
Perception towards the role of music in education	.308	.002
Self-efficacy	.309	.002

listening or passive response. In addition, 6.3% disagreed that music could be used as a reward when academic tasks are completed. The same number of respondents was of the opinion that music could not help to change children's energy level.

Music for Miscellaneous Benefits

As shown in Table 12, 17.7% of the respondents disagreed that music is for celebrating events, while 11.5% disagreed with the role of music in assisting the learning of other subjects. 10.4% excluded music from personal education, which is consistent with 13.5% who found music as not important for child development (Table 9). It is surprising to observe that 5.2% of the respondents did not acknowledge the opportunities that music could offer to help disabled children in learning. The results obtained for items 3 and 4 were of significant contrast, whereby 99% of the teachers affirmed that music learning is part of children's right, but

10.4% did not think music should be a part of their personal development, indicating about 9% contradictory thoughts towards music.

Music Used in Integration with Other Components

Several items from the questionnaire are related to the integrated approach in music teaching. These items are 'Music can help children learn language skills' (Table 9), 'Music can be used for demarcation of time', 'Music motivates children to learn other subjects', and 'Music is for special occasions' (note that the three statements above are from Table 12). It seems that not all the respondents agreed to the statement that music could be taught in integration with other component, as 2.1 to 17.7% disagreed with the four statements given above. These respondents' disagreement might have affected the teaching approach used as determined by the NPC, i.e. 'teaching one component in integration with other component'.

Teachers' Self Efficacy in Music Teaching

Of the responses gathered for the questions pertaining to self efficacy (Table 13), a range of 52.1 to 79.2% indicated their agreement, whereas 7.3 to 25.0% strongly agreed to the statements. There are also considerable percentages of the respondents, i.e. from 5.2 to 31.3% who disagreed with the statement. The 'strongly disagree' response, which is absent in the perception towards the role of music in education, emerges here but it only remains between 1.0 to 2.1 %.

Meanwhile, the respondents felt most confident about enjoying music with children, of which 94.8% agreed to the statement. However, questions pertaining to music teaching skills received responses that indicated a low level of the respondents' confidence, i.e. about 30% of the total number. 30.2% were not confident in teaching music, 32.3% stated that they were not comfortable with leading music activities, and 31.3% lacked skills in using music equipment. On the other hand, 16.7% of the respondents stated that they did not always enjoy music. Hence, it is clear that 30% of the respondents were not competent enough to carry out their duties in music education. These findings reflect the respondents' profile, whereby 30% of them were untrained in preschool education.

Table 14 provides the overall means for the three variables, with each divided into three equal intervals of high, moderate and low. Despite the

fact that 82.3% perceived positively on the role of music in preschool education, only 31% saw themselves as confident and 38.5% conducted musical activities with high frequency. Judged together with the characteristic of respondent's profile, it could be said that some teachers lacked the relevant pedagogical skills to translate their beliefs in musical benefits and values in their teaching. This is also supported by the comparatively low mean score for the teachers' self-efficacy.

The relationships between variables were also tested, and these are shown in Table 15. Based on the Pearson product-moment correlation coefficients, both the teachers' perceptions and self-efficacy were found to be correlated with the implementation of music. Hence, the findings gathered for the three variables are useful in evaluating the status of the implementation of music in preschool.

CONCLUSIONS

It is important to view the results of each statement in relation to the curriculum as a whole. There are statements where a higher percentage of response recorded at the low or negative end is to be considered as normal in terms of curriculum implementation. For example, the result that indicates 57.3% of the respondents conducted singing for celebration events only 'infrequently' (Table 5) deserves

TABLE 16
Items of disagreement in teachers' perception
(N=96)

Items	Percentage (%)
Music is for special occasions like birthdays, holidays and celebrations	17.7
Music assists the child with repeated tasks	15.6
Music is important for complete development of a child	13.5
Music motivates the children to learn about concepts and facts in other subjects	11.5
Music should be part of a personal education	10.4
Music can be used for improving pitch discrimination and tonal memory	9.4
Music can be used for the recognition of dynamics in music	8.3

no special attention from the researcher because celebration events are by nature scarce in the school's yearly calendar. On the other hand, the failure of 27.1% of the respondents to 'utilize any material from environment to produce melody' (Table 8) means that the implementation of that specific item in the curriculum is only moderately effective. Some results, on the other hand, would need serious attention if there were any responses in the negative form. Generally speaking, any percentage of responses in the form of 'never' for the implementation of music activities indicates that that particular component is not effectively conducted or missing in the education at the respective schools.

Due to the comparatively low percentage of the respondents who conducted 'music and movement activities' 'daily', i.e. between 12.5 to 28.1%, the researcher would not regard 'music and movement activities' as being effectively carried out in preschools. In preschool education, it is only natural for music and movement to be conducted daily. Thus, it is inappropriate to conclude that the implementation of 'music and movement activities' in a school as effective if the children were only asked to move their bodies to music once a week, or even lesser. Hence, there is a room for improvement, particularly concerning the teaching of 'music and movement activities' in government preschools, where 'music and movement activities' should be conducted more frequently in order to achieve optimal outcomes of the activities.

In general, the category for 'singing and vocal activities' (Table 5) was actively implemented. Group singing was the most frequently conducted activity in the entire study, with 58.3% of the respondents conducted it daily and 37.5% weekly. The fact that 15.6% of the respondents had never prepared children for formal performance, however, deserves more attention.

As for the category of 'listening activities' (Table 7), 1.0 to 9.4% of the teacher had never conducted listening activities listed in the questionnaire. In fact, the percentage of the respondents who actually conducted listening activities daily was not large, i.e. between 5.2

to 31.3%. Therefore, the implementation of the listening activities could be said as moderately active, at least in terms of the frequency of the activities being conducted.

Meanwhile, it is the results for the category of 'sound exploration and instrumental activities' (Table 8) that demands the most attention as majority of the respondents (between 45.8 to 60.4%) only conducted them 'infrequently', whereas 4.2 to 31.3 % had never conducted these activities. However, the low frequency of practices for this particular category is understandable as 'sound exploration and instrumental activities' is not the central component in the curriculum, while the fact that some teachers have never carried out these activities in their classes needs due attention. In relation to this, it is worth pointing out that music activities in government preschools are highly dependent on audiovisual equipment, while music instrument other than percussion is rarely used both by the teachers and students (Table 4).

As for the teachers' perception, the preschool teachers surveyed in this study generally perceived that music has an important role. It was also found that, although the concept of teaching music in preschool education has not been fully understood by some respondents, a small percentage of them rejected the fundamental statements regarding music and child development. Based on the statements that received unanimous agreement, preschool music teachers were found to relate music to 'creativity', 'patriotism', 'learning of art' (Table 9), 'changing of mood', and 'stress release' (Table 11), as well as 'recreation' (Table 12). On the contrary, the statements that had most of the respondents disagreeing with are listed in Table 16. From this list, it can be said that the understanding of the fundamentals of the early childhood music education has not been fully grasped by some of the respondents.

As for the teachers' self efficacy, although 69.8% of the respondents felt that they were confident with their abilities to teach music, 30.2% of them stated otherwise. Meanwhile, a further investigation on self-efficacy revealed that 33.4% of the respondents did not have the

confidence to use music equipment and 33.3% of them felt uncomfortable leading music activities in their classes. The findings reaffirm the two issues in music education in Malaysia, namely the low perception towards music and music education by the society, and the music teachers' lack of readiness and teaching ability.

Therefore, teacher training is the major area to be worked on in order to change the perception of teachers and to raise their teaching competency. In particular, training in the concept and philosophy of music in the early childhood education is necessary for preschool teachers to conceptualise and comprehend the idea of music in preschool education, as well as the role and connection between each sub-component, namely singing, movement, listening, instrument playing, and sound exploration, among others.

Training in music pedagogy, on the other hand, will equip teachers with the relevant skills to conduct various music activities that are required in preschool music education. Moreover, it is vital to raise the confidence level of the teacher. It is hoped that the shortcomings in implementation can be overcome when the two issues are being dealt with through teacher training courses.

Future research can focus on the process of music making in preschool by applying case study and field observation, and this can be approached from the viewpoint of a student. A study and evaluation on the existing teacher training programme for pre-service preschool teachers in Malaysia should also be conducted. These evaluations may examine the courses needed and the type of courses that are appropriate to improve preschool teachers' preparation and encourage implementation of music teaching in their classroom. A historical study which systematically examines how music activities have developed in preschool in the past until the present would also be very valuable. There is also a need to look into developing suitable music activities to suit the local needs, which will create greater awareness towards the importance of music education in this country.

ENDNOTES

- ¹At present, national preschools are located as an additional provision of a primary school, a structure which has been developed since 1992.
- ²The number of government preschools increased rapidly throughout the country from the existing number of 1131 preschools in 2001 to more than 2000 preschools in 2004.
- ³Much effort has been invested to provide in-service training for preschool teachers to ensure quality teaching and understanding of the new curriculum prior to the implementation of the 'National Preschool Curriculum'. More than 3000 teachers who were trained in preschool education before this were given 'refresher course' before they were placed in this newly opened government preschools.
- ⁴The National Preschool Curriculum consists of six components, which are language and communication component; cognitive development component; spiritual and moral education component; socio-emotion development component; physical development component; and, creative and aesthetic component.
- ⁵This applies to all states in Malaysia, with the exception of the East Malaysia and some areas like Georgetown, where racial composition is different from the other states.
- ⁶Resolution of the First Malaysia Music Education Conference 2002.
- ⁷In this study, implementation of music was measured from its frequency of conduct. A five-point Likert scale was used, indicating 1 'never', 2 'once or twice a semester', 3 'once every few weeks', 4 'once or twice a week', 5 'everyday'. A rough interpretation of implementation level was made by dividing the scale into three, i.e. 1-2.34 'low', 2.34-3.66 'moderate', and 3.66-5 'high'.
- ⁸In analyzing the frequency of conduct for each music activities, the results for Likert scale 2 'once or twice a semester', and 3 'once every few weeks' were grouped into one category under 'infrequently' to make a clear presentation. Hence, there are only four categories in the results reported for the frequency of conduct of music activities, i.e. 'never', 'infrequently', 'weekly' and 'daily'.
- ⁹The teacher training certificate ceased to be awarded in 1996 and was replaced by the teacher training diploma.
- ¹⁰Qualification, here, mainly refers to the graded examination for instrumental skill organized by examination board such as the ABRSM, Trinity, LCM, and so on.

¹¹Listening activities that are embedded within the music and movement activities are excluded in Table 7.

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Visitor's Adaptability toward Natural Elements and Regulations in Penang National Park, Malaysia

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ABSTRACT

In 2006, Penang National Park (PNP) became the second National Park destination in Malaysia. Through PNP complaint forms, the visitor reports some discomfort conditions from other visitors, facilities, and services while in the park. Cleanliness, signage, operational time of certain facilities and guide behaviour were negatively reported by visitors. Thus, the negative conditions will have an adverse effect on PNP as a conservation area. With this in mind, the research was carried out to learn about visitor's adaptation in PNP. A total of 402 questionnaires were administered to domestic and international visitors. Some of the items in the questionnaire were further grouped into 4 concepts. Results show significant differences between the mean scores for domestic and international visitors on the concepts of regulation, active-activity, passive-activity and noisy condition, whereby the international visitors were found to be more likely to adapt to the conditions than those of the domestic. On the concept of regulation, both the international and domestic visitors could adapt toward the Park's regulation. The significance of the results will be forwarded to the PNP management for their consideration of the visitors' level of adaptation to reduce the negative impacts in the effort keep environmental sustainability in PNP.

Keywords: Adaptation level, significant aspect, negative impact, sustainability

INTRODUCTION

In 2006, Penang National Park (PNP) became the second National Park destination for the international and domestic visitors, after Taman Negara Pahang. As a young national park in the country, Penang National Park (PNP) will encounter many problems in carrying out the planned strategies for the park because not everyone can easily understand and follow the procedures (DWNP's Annual Report, 2007) that are meant for visitors who visit the place. The negative impacts caused by visitors'

actions require immediate management actions; otherwise, Penang National Park will continue to lose its sustainability. As a new park which has yet to be tested, various efforts are needed to increase the number of visitors to PNP. The data obtained from the management of the PNP from 2004 – 2007 showed that the average number of visitors to the park increased by 39.03% for the domestic and this was 13.33% for the international visitors. Meanwhile, the yearly growth averaged out to about 13% for both the domestic and international visitors.

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As a reserved area, the PNP would therefore have the special rules and regulations set up to protect its integrity. The visitors are expected to abide by these rules and regulations, even though some may have difficulties adapting to them and become satisfied due to certain requirements from the park's management. This may be due to their motivations for visitors and individual potential to adjust to the different environments. According to Lindberg *et al.* (1997), the increasing number of visitors will automatically affect the function of an area, either positively or negatively. The impacts can be viewed from many aspects such as economics, socio-cultural and environmental.

The impact from the economic aspect is considered as positive as Penang National Park can attract visitors to come and spend their money at the place. On the other hand, the environmental and socio-cultural impacts will not only get positive impact, but negative ones as well. In a positive note, the increasing number of visitors will challenge the management to sustain their performance in administering the area. Moreover, they will make the PNP famous with its environment and culture, as well as the quality of their experiences during the trips to the park (Lindberg *et al.*, 1997). Overall, the level of negative impacts could be seen from the 2006 PNP's Annual Report, which recorded and indicated that Pulau Pinang was the fourth highest in terms of wildlife cases in Malaysia (DWNP's Annual Report, 2007). Furthermore, PNP has its own problems. Based on the PNP complaint forms, the visitors have reported some discomfort conditions that are created by other visitors, as well as in terms of the facilities, services during their track, etc. Among other, cleanliness, poor signage, operational time for certain facilities and behaviour of guide guides have been negatively recorded by the visitors. The cleanliness of the park is dependent on the visitors' attitudes, and this aspect will determine whether some visitors are capable or not in ensuring its cleanliness. Besides regulations pertaining to cleanliness, the park has certain operational time, while the schedule is provided to consider its condition

and ecosystem. Weather, animal activities, and accessibility condition affect the schedule. In other words, the presence of visitors could disturb the activities of the animals at the park. On the other hand, the condition of nature could disturb the visitors' comfort. When visiting the park, the visitors should know that as conservation area, the park has regulations that are different from resorts, to which they are requested to adapt to.

Visitors' attitude would be applied depend on their characteristic, while each visitor might have a variety characteristics. The similarities and differences of visitors' characteristics may be related to their adaptation level. Visitors may not know that their attitude will have negative effects on other visitors and on the nature. Thus, these are the reasons for enforcing regulations on all visitors at PNP. In other words, the different needs of the PNPs' entities, especially between the visitors, are expected to pose an adverse effect on the PNP as a conservation designation. According Stankey *et al.* (1999 cited in Ankre, 2007), a new environment would change the visitor's lifestyle, and the new lifestyle should be accepted. However, it depends on the personal characteristics of visitors. This changing process is known as adaptation. Adaptation needs the process, i.e. the process in which visitors can gradually adapt to a new environment or they can totally reject it. Based on the technical report of the European Environment Agency for 2007, there are two types of adaptation, namely autonomous and planned adaptations. In particular, autonomous adaptation is related to internal factors. This study specifically looked into the visitors' adaptation towards the natural attractions, whereby their adaptability is determined by their characteristics. On the contrary, planned adaptation is derived from external factors, and this particular adaptation specifically relates to visitor's adaptation towards regulations, where the management requires them to obey all the regulations imposed. To accept the planned adaptation is depending on autonomous adaptation. On the other hand, autonomous contains of internal factors, where visitors could adapt well to

the external factors if the internal factor is capable. Without the capability of internal factor, visitors could adapt but not for long, while the degree of satisfaction would be affected or it might be a negative impact to the surrounding environment. Therefore, focusing on the internal factors is important in term of minimizing the negative impacts of visitor's attitude. In items categorizing to see the correlation between the groups, this study follows that of Britvina (2005) who examined attractions as external factors, while interest, needs, values, motives, and orientations as internal factors. Even though these concepts were implied to the immigrants, the purpose of this study was to determine how adaptive immigrants affect their new environment. According to Ricardson and Loomis (2004), the visitation at a recreation site is influenced by expected climatic conditions in the area, as well by other variables which are not limited to a visitor's chosen recreation activities, travel costs, and demographic characteristics. In particular, the climatic conditions may affect visitation both directly and indirectly.

Considering the predicted impacts of tourism on the PNP, a management action is required immediately to tackle these negative impacts by analyzing the adaptation levels of the visitors' experience. This research was carried out to determine the similarities and differences between the international and domestic visitors' adaptations. Logically, domestic visitors should be adapting better than their international counterparts because of their familiarity to the geographic condition. Meanwhile, the geographic condition may be affecting the tourists' comfort, but this may not be the case for international tourists who are not familiar with the new environment. For certain people, this changing of environment can touch their feeling of adventure, because the adaptation level will appear as their special interest (Ankre, 2007). Beside the changes in the geographic condition, there are two aspects which influence the adaptation level, namely external and internal.

MATERIALS AND METHOD

This quantitative research was carried out to observe both the international and domestic visitors at Penang National Park. The average number of visitors was estimated to be around 22,672 visitors per year. According to Krejcie and Morgan (1970), the samples should be more than 379 in order to get 95% reliability. In fact, the research obtained 402 filled questionnaires, indicating that 18 % estimation over a year of visitors was achieved. A total of 28 days were taken to carry out the survey, which was started at the end of July up to August 2008. During this period, the survey was carried out every day and it was started from 09.00 a.m. to 07.00 p.m. Each questionnaire took approximately 10 to 15 minutes to complete.

Prior to the survey, a pilot study was carried out at Penang National Park to check the reliability and respondents' understanding of the questionnaires. Getting the honest answer from visitors, i.e. whether they adaptable or not, is not a simple problem, what more to answer about their adaptation towards regulations. The Cronbach's Alpha from the results of the pilot study was medium, i.e. 0.5 – 0.6. Hence, to increase the reliability, the author did some changes to the questionnaire. As a development of Britvina's categories of external aspects in adaptation level, some of the items in the questionnaire were grouped into four concepts, namely visitor's adaptation towards noise level (Cronbach's Alpha = 0.70), visitor's adaptation towards natural attraction during passive-activity (Cronbach's Alpha = 0.70), visitor's adaptation towards natural attraction during active-activity (Cronbach's Alpha = 0.72) and visitor's adaptation toward Park's regulation (Cronbach's Alpha = 0.70). The data obtained from the questionnaires were coded and entered into a database. It was analyzed using the Statistical Package for Social Science 15 (SPSS). Before using the t-test, the data were analyzed using the Exploratory Data Analysis to determine whether the data were normally distributed. It is important to note that the condition for running a t-test is that the data

should be normally distributed. Otherwise, a non-parametric test must be employed. The variables were measured using a 5 point Likert Scale (with 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree). In the analysis, all variables were changed into negative items. In order to summarize the table, the scale should therefore be changed oppositely (i.e. 1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, and 5 = strongly disagree). Similarly, to get the mean scores for the visitors' experience, the variables were analyzed using the Independent Sample T-Test. Meanwhile, to get the adaptation level of the visitors, a new scoring was done by summarizing them into 3 levels, namely low, moderate, and high level.

RESULTS

During the survey period of the study (June 21 to September 12, 2001), the visitors were selected randomly at five locations. The questions were asked to identify the adaptation level towards the activities and the weather. Here, the activities and weather were assumed as the external factors, while the visitors' characteristics were taken as the internal factors. The activities

contained hiking, sightseeing, driving Trail Ridge Road, and others. The surveys were distributed to the respondents who took the survey with them to be completed and mailed at a later date. The mail-returned surveys were chosen because of the complexity of the climate scenarios and the amount of time required completing the questionnaire. The response rate was found to be 70%. Using the pre- and post-interview method, Dearden and Harron (1994) examined the adaptability of trekkers during their trip. Weather, activities and behaviour of hill tribes were the external factors. Meanwhile, demographic, behaviour, compatibility, sense of adventures and remoteness of trekkers were used as the internal factors. A total of 69 respondents completed their post questionnaire. The two separate 2-month periods were selected to tap the peak winter and summer trekking markets. In particular, the internal factor was an independent factor which derived from the visitors' personality. Other characteristics, such as age, gender, education, would affect the interest, needs, values, motives, and orientation amongst visitors. For example, kids and adults have different motivations in their visitations to PNP; kids usually want to swim at the

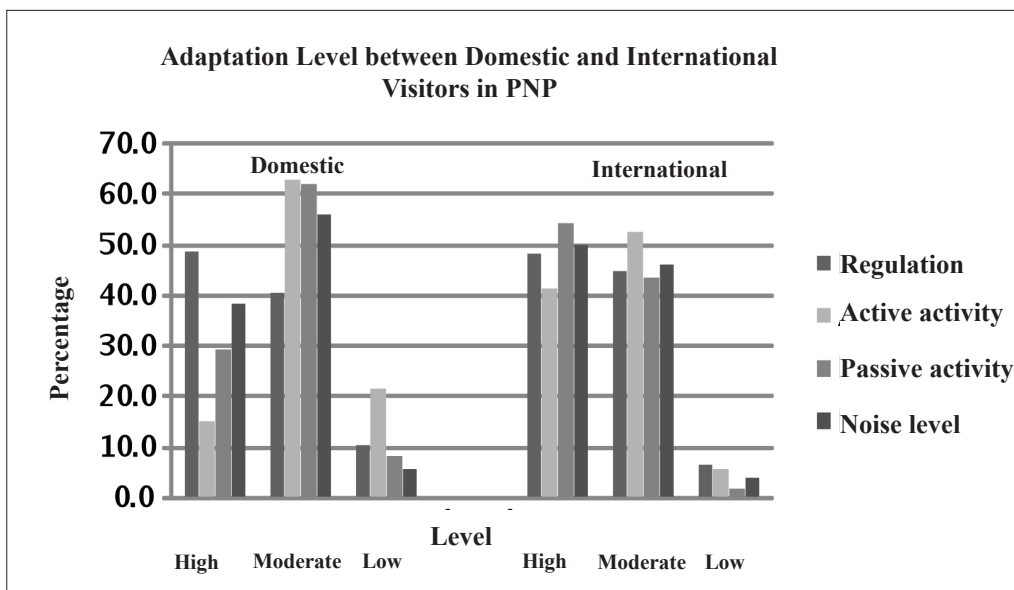


Fig. 1: The percentage of adaptation level in each concept

TABLE 1
Studies previously carried out on adaptation level

ADAPTATION		Britvina (2005)	Richardson & Loomis (2004)	Dearden & Harron (1994)
INTERNAL FACTOR	Nationality		V	V
	Behaviour of visitors			V
	Sense of remoteness			V
	Sense of adventure			V
	Education	V	V	V
	Motivation	V	V	V
	Gender	V	V	V
	Needs	V		
	Age	V	V	V
EXTERNAL FACTOR	Number of group			V
	Weather		V	V
	Activity	V	V	V
	Behaviour of trail			V

TABLE 2
The number of visitors to PNP from 2003 to 2007

Visitors' place of origin	Year				
	2003 (N1)	2004 (N2)	2005 (N3)	2006 (N4)	2007 (N5)
Domestic	5271	16830	9238	22982	26036
International	867	4938	3309	4502	6163
Total	6138	21768	12547	27484	32199

(Adopted from PNP manager's data)

beach, while adult visitors want to sit and have gathering at the beach. In many cases, the visitors' internal factors were found to not only impose negative impacts on the nature, but on other visitors as well.

Fig. 1 shows that on average, 10% of the visitors in both the groups visiting PNP were at low level of adaptation, which meant that they could easily adapt themselves with the new environment in the park. According to Goodwin, Kent, Walpole, and Ward (1997), PNP has a special regulation which is known as a conservation area, whereby the visitors could maintain their attitude. It was proven that based on the percentage of the visitors' adaptation towards regulations, i.e. almost 50% of both groups were found to be at high level. The visitors' adaptability towards the regulation is important to control the sustainability of the park as their presence could negatively affect the area. Moreover, visitors who could not adapt with the regulations have a higher possibility of causing negative impact to the park (Goodwin *et al.*, 1997).

The results reveal significant differences in the mean found for the domestic and international visitors in term of their responses towards active-activity concept ($t=7.17, p=0.01$), passive-activity concept ($t=5.01, p=0.01$), and noise level concept ($t=2.20, p=0.03$). These indicated that international visitors were more likely to easily adapt than domestic visitors in the three concepts. On the other hand, the concept on the regulation had no significant difference

in determining the similarities in the adaptation level of both the domestic and international visitors towards the park's regulations, as presented in Table 3.

The significance of the results illustrated that the international visitors were more likely to adapt to the existing conditions rather than the domestic ones. This was found to be contradictory for the common where domestic visitors were more likely to adapt towards the conditions as compared to the international visitors. This was determined by looking at the percentages of the internal aspects in each group to find the differences in the characteristics between the international and domestic visitors. Based on the concept developed by Britvina (2005), the number of destinations, gender, age, duration, reasons for visiting as well as the frequency of visits were considered as the internal factors. Further details of the characters of the two groups are given Table 4.

By comparing the mean scores, many differences were found between the international and domestic visitors. For the domestic visitors, the number of destinations and duration of stay were higher than those of the international counterpart. 58.1% of the international visitors were male and the mean age was older (thirty-three years old) than the domestic visitors (twenty-three years old). The motivation or reasons for their visits were also found to be different. The international visitors stated that they wanted to experience the natural environment, while the domestic visitors'

TABLE 3
Adaptability level of domestic and international visitors

Adaptation towards :	Nationality ¹		<i>t</i>	<i>p</i>
	Domestic	International		
Active-activity	3.0	2.5	7.17	0.01
Passive-activity	2.7	2.3	5.01	0.01
Noise level	2.6	2.4	2.20	0.03
Regulation	2.5	2.5	0.99	0.92

¹Cell entries are means and means are based on 5 point Likert scale 1= strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree

TABLE 4
Domestic and international visitors' background information

Character	Mean			
	Nationality			
	Domestic	N	International	N
First time visit	65.6 %	282	81.2 %	101
Reason to visit:				
Nature lover	26.1 %	283	60.2 %	103
Just visit	28.6 %	283	28.2 %	103
Recreation	40.6 %	283	35.0 %	103
Research	18.7 %	283	5.8 %	103
Gender:				
Female	44.4 %	295	41.9 %	105
Male	55.6 %	295	58.1 %	105

purposes were for sight-seeing, recreation, and research. It was also found that 81.2 % of the international visitors were the first time visitors. Based on the differences in the visitors' characters, the relationship between the external factors (activity, regulation, and noise level) and the internal aspects (number of destination, gender, age, duration, reason for visit, first time visit, etc.) were examined to identify the significant attributes. The results indicated that not all of the internal factors influenced their adaptability towards the external factors.

ADAPTABILITY TOWARD NATURAL ATTRACTION

The main attractions in the national park include the nature, including flora, fauna, and the view. The visitors would explore such attractions when they were doing their activities, which are either active or passive.

Active Activities

During the active activity, the visitors would experience the natural environment while they were doing activities like climbing, tracking, swimming, camping, fishing, etc. The results showed a significant difference between the

international and domestic visitors, whereby the former were more likely to adapt easily as compared to the latter when carrying out active activities. By running the description analysis in SPSS 15.0, the domestic visitors showed a high adaptation level towards the natural elements during active activities (i.e. 15 % only), while the international visitors scored 41.30% for the same aspect (see *Fig. 1*). Such difference might be caused by several factors. Among other, the mean of the internal significant attributes in this concept consists of the number of destinations, with an average of two places visited, which age was about thirty-three years old, and the duration of stay was around six hours of visit (Table 5). The other significant attributes were indicated by the significant difference (t) for the motivation, i.e. for the nature or not for research (Table 6). Based on results, the males were more likely to adapt toward active activities than the female visitors (Table 7). Meanwhile, gender and age were also found as significant attributes in the previous study (Ankre, 2007), whereby the male and young adults aged 15-43 year old showed significant difference or they have higher adaptation level towards active activities. Finally, the most significant attribute was because most of the internationals had never

TABLE 5
Domestic and international visitors' experience

Character	Nationality			
	Domestic		International	
	*	N	*	N
Duration of stay	12 hours	295	6 hours	105
Number of animal seen	2 species	287	3 species	102
Number of destination	4 places	276	2 places	98

* Cell entries are average of occurrences

heard about Penang National Park. These results might be caused by the information received about the PNP's security, which recorded that Pulau Pinang was ranked the fourth highest in having cases involving wildlife in Malaysia (DWNP's Annual Report, 2007), in which it had affected the visitors' anxiety.

Passive Activities

During passive activities, the visitors experienced the impacts of the environmental changes by just viewing the natural environment and experiencing the humid weather. Just like the active activities, there was a significant difference between the international and domestic visitors, whereby the international visitors were more likely to adapt easily as compared to the domestic visitors for the passive activities. In particular, 29.50% of the domestic visitors were recorded to have a high adaptation level towards natural element, while this was 54.30% the international visitors (*Fig. 1*). The significant attributes included the number of destinations (with the two places) visited, the average age of thirty-three years old, duration of stay (for six hours), and the motivation for nature (Table 5). As compared to the active activities, there were differences in the significant attributes, where gender was not included. Moreover, the motivation was also not indicated for recreation, but for others.

ADAPTABILITY TOWARD NOISY CONDITION

Sound is a sensitive factor at and for certain places. In some cases, people can tolerate or even pleased with disturbing sound if they thought that it would enhance the sense of experience, such as at the playground, climbing, bungee jumping, etc. As for National Park, noise must be controlled for the area and to the expectation of the visitors. This is because sounds of nature are more interesting and they give special effects to the visitors, such as sounds of monkeys, birds, fish, swaying leaves, etc. In fishing hamlet, it could be positive to hear the sound from fishing boat while hearing a motorboat when on a sea cliff in sunset could be viewed as negative (Ankre, 2007). As illustrated in Table 3, the international visitors were more likely to adapt towards the noise level in the park than the domestic visitors. This finding indicates that the domestic visitors prefer silent situations compared to the international guests. The significant attributes of the international visitors' characteristics include the number of destinations (with two places visited), and the duration of stay (for six hours of visit). This might also be caused by 56.80 % (Table 4) of the visitors were first-timers to the place and most of them did not know about Penang National Park before their visits.

In considering the significant attributes, it is also helpful to know "curious to know" or the reasons why the domestic visitors were

TABLE 6
Adaptability level based on reason for visiting PNP

Adaptation towards :	Nature lover ¹			Pure visit ¹			Recreation ¹			Research ¹					
	Yes	No	t	Yes	No	t	Yes	No	t	Yes	No	t	p		
Active-activity	2.7	3.0	2.83	0.01	2.8	2.9	1.07	0.29	2.9	2.9	2.9	0.66	0.51	2.70	0.01
Passive-activity	2.5	2.6	2.09	0.04	2.6	2.6	0.15	0.89	2.5	2.6	2.6	1.26	0.21	1.24	0.22
Noise level	2.5	2.5	0.75	0.45	2.5	2.5	0.17	0.87	2.5	2.5	2.5	0.30	0.76	1.48	0.14
Regulation	2.5	2.5	0.64	0.52	2.5	2.5	0.81	0.42	2.6	2.5	2.6	1.61	0.11	3.37	0.01

¹Cell entries are means and means are based on 5 point Likert scale 1= strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree

TABLE 7
Adaptability level based on gender

Adaptation level towards:	Gender ¹		t	p
	Female	Male		
Active-activity	2.9	2.8	1.56	0.12
Passive-activity	2.6	2.6	0.21	0.83
Noise level	2.4	2.6	3.09	0.02
Regulation	2.4	2.7	3.76	0.01

¹Cell entries are means and means are based on 5 point Likert scale 1= strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree

more sensitive to noise than the international ones. Another conclusion could be derived by concentrating on the mean of the domestics' characteristics which touched on the aspects of their inadaptability towards noise level. This might be influenced by the number of destinations (with an average of four places visited), and that they were not visiting the park for the first time (Table 8). These additional aspects are more comprehensive to be used in understanding the causes of the inadaptability of domestic visitors toward noisy condition. When the visitors have visited four destinations or more, they may be encouraged to have a better condition. Moreover, this was not their first visit to the place so they will definitely concentrate on the quality of experience than the quantity. Meanwhile, the international visitors were found to focus on the opposite. As a dominant character of the international visitors, 81.2% came for the first visit while 60.2% stated nature lover as the reason, and they were curious to explore the nature of the park more than that of the domestic visitors.

ADAPTABILITY TOWARD REGULATIONS

There is no compromise between regulations and visitor's attitude, so regulation is categorized as one of the planned adaptations (European Environment Agency Technical Report, 2007). This type of adaptation is influenced by external factors. It means the visitor's adaptability is 'forced' by the park management to obey the regulation. There were six questions on the attitude toward flora, fauna, littering, and forbidden needs such as smoking, drinking alcohol, and bringing beverages. Generally, the results show that no significance difference was found between the international and domestic visitors, as both of the groups could adapt toward the regulations well. Although it is not easy to get their honest answer, result from the Cronbach Alpha is quite high, i.e. 0.7. There was a significant difference between the genders as a significant attribute of adaptation level towards regulations ($t = 3.76, p = 0.01$). However, gender was the only aspect which describes an adaptation level. For example, female visitors were found to be more adaptable than their male

TABLE 8
Adaptability level based on first visit

Concept	Mean of adaptability based on first visitation				t	p
	First time visitation					
	First time visitor	N	Repeat visitor	N		
Active-activity	26.3 %	266	48.1 %	116	-0.92	0.36
Passive-activity	48.9 %	268	71.4 %	116	-1.69	0.93
Noisy condition	56.8 %	266	56.7 %	116	-2.21	0.03
Regulation	51.5 %	268	48.6 %	116	-1.09	0.28

'Cell entries are means and means are based on 5 point Likert scale 1= strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree

counterparts towards the regulations (Table 7). In fact, the visitors should manage their attitude towards the surrounding ecosystem in the park because human is a part of the landscape and their attitude will definitely affect their environment, either directly or indirectly (Burgeru, 2000).

DISCUSSION AND POLICY IMPLICATIONS

Adaptation is a process through which societies make themselves better able to handle an uncertain future (UNFCCC, 2007). In the process of adaptation, visitors can gradually feel better with the new environment or they can totally reject it. It is not easy to adjust to a new environment because some people cannot adapt to other lifestyle, through food, water and weather. The differences in visitors' cultural and characteristic background will influence their (domestic and international) adaptability. There are six different entities involved in the ecotourism system of the national park; these include visitors, natural areas and their manager, local communities, business, government, and non-government organization. This ecotourism system can generate both parasitism and mutual symbiosis among the entities (Lindberg *et al.*, 1997). When an entity has its own needs towards the national park, there may be conflicts for the other entities. It is impossible to assume that all the entities are in good condition. Thus, to handle such situation, the park's management has to plan a strategy to minimize the parasitism and maximize the mutual symbiosis. Based on the results derived in this study, visitors in PNP have similarities in their adaptability level in the regulation concept whereby both of the domestic international visitors could adapt towards the regulation concept in PNP. On the contrary, the differences were found for the other concepts, whereby the international visitors were more likely to adapt toward active activities, passive activity and noise level than the domestic visitors. The differences in the visitors' culture and characteristics will also influence their adaptation levels. As explained

by Carr (2000), the culture and characteristics of a visitor led to various needs, lifestyle, and attitude. The finding for the visitors' activities seem to agree with the result obtained in a study by Madge (1996) who also found that anxiety feeling that is caused by age and gender as a part of the contributing aspects of geography anxiety. Similarly, Ankre (2007) explained that the silence of visitor depends on three concepts attitudes, experiences, and motives; in fact, silence is not absolute in nature. Adaptability is not easy to be measured, as there are many aspects to be considered, which include internal and external aspects (Britvina, 2005). Therefore, successful management could be achieved if the needs of the travellers from the different cultures are understood and they are accurately responded to (Yuksel, 2004). In this way, the negative impacts caused by visitor's attitude can be reduced through these environmental indicators, including fragility of the ecosystems and biodiversity, waste disposal, water consumption, intensity of land use and physical impacts, protection of the atmosphere, noise level, and visual impact (Lim, 2003). Based on the results obtained, the study proposed the management to enhance the quality of visitors' experience at Penang National Park. The recommendations are further explained below:

Zoning and Time Schedule for Fishing Activity

Penang National Park is surrounded by fishing villages, where fishermen fish in the PNP area. Such continuous activity will damage the water ecosystem if the local demand for fish becomes higher than the amount of fish available. Thus, the management should create zone for the breeding area of fish and other marine ecosystem according to their needs. This is particularly important in maintaining the sustainability of the reserved park.

Carrying Capacity

Nowadays, a high priority is given to increase the number of visitors to the recreational areas as this will also increase the profit gained through

visitors' expenditures at the park (Hsu, Tsai and Wu, 2009). In contrast, Brown, Turner, Hameed and Bateman (1994) stated that the visitors' presence would affect the sustainability of the ecosystem at the conservation area. The results illustrated that the international visitors were more likely to adapt toward the level of noise level, suggesting that the domestic visitors prefer silent and tranquil situation. However, the management should limit the number of visitors to the recreational places because the nature would be affected by the presence of too many visitors, and their comfort would also be affected by the presence of each other (Goodwin *et al.*, 1997). Thus, the capacity and capability of handling visitors in each area and at one time should be taken into consideration. The average duration of stay for the domestic visitors was 12 hours, while this was 6 hours for the international visitors, whereas the mode of the earlier group's visit was only 5 hours as compared to 2 hours for the latter group. This finding showed that most of the domestic visitors were overnight visitors while the international visitors only came for day time visits. These durations affected their adaptation level, whereby the international visitors were found to easily adjust to the natural elements and noise level as compared to the domestic group. Therefore, the management should control the number of visitors and limit the duration of stay during the peak seasons to enhance their adaptation level during the trip.

Implications on the Regulations at the Park

The regulation could never stand alone without the responds from the all related entities (Samawi and Najjar, 2007). The implication of regulation reflected the credibility of the park's management in enforcing the visitors to obey the rules. In addition, the way they persuade all the entities at the national park to work together is very important. Different visitors may have different characteristics and backgrounds, which therefore show different potentials to understand and follow the regulations in the area. Moreover, besides being a conservation park, the PNP is also an ecotourism place, where the visitors

come to spend their leisure time in a variety of ways. Based on the results gathered on the regulation, there was no significant difference between the domestic and international visitors in terms of their adaptability towards the park's regulation. However, it was rather surprising to find a significant difference between the groups in term of gender. The female visitors were found to more likely to adapt to the regulations than males. Thus, the management should concentrate more on the male visitors' attitude and needs, and the possible factors leading to such responses should also be studied. As the existing regulation of the park cannot be changed, the visitors should obey them. This poses a big challenge for the park's management, particularly in trying to persuade and get the cooperation from all the visitors, regardless their nationality or gender, and other responsible entities at the national park.

Beverage Shop in Kerachut Beach

The Kerachut beach is the furthest destination that the visitors can reach at the park. To reach the place, one has to walk for at least three km or about two hours from the main entrance, Teluk Bahang. Nowadays, the management allows the visitors to bring their own food and drinks from outside. Unfortunately, this proved to be troublesome for the visitors because they have to carry heavy bag packs along the track to Kerachut Beach. The survey indicated that about 10% of the visitors reported that food and beverages at Kerachut beach were not necessary. Based on the findings of the present study, however, it is recommended that the management of Penang National Park consider the visitors' adaptation levels towards the performance of the park. This helps to reduce negative impacts while maintaining the sustainability of the conservation area, as it could only be achieved if there is integrity between the entities (Brown *et al.*, 1994). If the visitors are allowed to bring their own food while tracking, there are possibilities that they will litter their rubbish after consuming the food and drinks that they have brought, and this is clearly against

the park's regulations. In order to avoid such incident, the management should provide shops selling food and beverages at Kerachut Beach.

CONCLUSIONS

Both of the domestic and international visitors could adapt towards the regulation concept at PNP. As for the three concepts, on the other hand, differences were found whereby the international visitors were more likely to adapt towards active-activity, passive activity, and noise level than the domestic visitors. Both the findings and the recommendations resulting from the present study will be proposed to the Management of Penang National Park. A better understanding of visitors' adaptation is apparently necessary in order to boost the tourism market. This study has also highlighted several limitations; among other, some visitors were not able to answer the questionnaire for varied reasons. As a result, a longer period of time (e.g. more than 2 months) for data collection should be allocated in future research. It is also recommended that future studies explore other aspects which are correlated with visitors' adaptability, particularly their adaptation and acceptance towards the existing regulation.

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Analysing Collocational Patterns of Semi-Technical Words in Science Textbooks

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ABSTRACT

This paper analyses the discourse of science through the study of collocational patterns of semi-technical words in science textbooks used by upper secondary students in Malaysia. Semi-technical vocabulary is considered to be one of the most problematic lexical areas for second language learners learning science in English, as these words usually take on extended meanings in technical contexts. The study explores the collocational and colligational patterns of semi-technical words in a corpus of 12 science textbooks. The analysis found some common lexical and grammatical patterns which seemed to share similar aspects of meaning and also showed that collocations of semi-technical words often form compounds with extended and more genre specific meanings. Thus, it is important to focus on some sense and grammar patterns as students need to understand why even though many of these collocations share similar syntactic characteristics, the flexibility of some combinations are arbitrarily blocked by usage.

Keywords: Semi-technical, corpus, EST, collocation, prescribed textbooks, ESP

INTRODUCTION

Insights from corpus research have revolutionized the way language is viewed, especially words and their relationship with each other in context (Schmitt, 2000). The aim of corpus linguistics is to analyse and describe the language use as realised in the selected texts (Tognini-Bonelli, 2001).

Corpus linguistics does not begin by accepting certain rules as given, in fact, it defines its own sets of rules before being applied and provides new rules and parameters for linguistic description (Tognini-Bonelli, 2001). Corpus research starts from the assumption that meaning, in its different forms, is realized

foremost at the linguistic level (Firth, 1957 in Tognini-Bonelli, 2001, p.157). Tognini-Bonelli (2001) adds that corpus research allows us to investigate the co-selection of words or the way in which words interact with each other as these patterns of interactions between words can create new and complex units of meaning.

There is reasonable consensus that a corpus will not just provide insights into the contents but also that the results of the analyses will be claimed to be typical of the language from which the corpus was selected. Corpus research allows researchers and learners to gain insights into the language, particularly the interconnection of lexical and grammatical patterns, collocations,

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colligations, the frequency of words and the use and functional behaviour of these words (Tognini-Bonelli, 2001; Schmitt, 2000; Nelson, 2001; Sinclair, 1991).

The basis of using corpora in language teaching and learning is the rising awareness that learners need to understand that there is variability in language use (Stern, 1992). Rather than relying on a strict code of rules in learning language which quite often restricts input, learners are given ample opportunity to discover language and systematize it for themselves for better understanding and acquisition of language (Tomlinson, 1998; Willis, 1998). Tomlinson (1998) adds that this awareness can make learners more attentive to salient features of their input and can facilitate language acquisition.

Hunston and Francis (2000) insist that through corpus analysis, learners would be encouraged to think of grammar differently in that a corpus can provide the learner and the teacher information about 'what is or is not said in a given language or variety and what certain grammatical choices mean' (2000, p.260). This suggests that grammar cannot explain but can generalize and that existing rules on grammar can be mostly used as an abstract guideline. It would point out frequently occurring features of language and also 'deviant' patterns or language which is not typical but are strongly associated to particular registers (Gavioli, 1997). Awareness of what is typical and untypical will provide the learners with more autonomy to be creative in language (Hunston and Francis, 2000).

THE LANGUAGE OF SCIENCE

The language of Science is far different from the languages that students use in other subjects areas (Laplante, 1997). The language of Science and English for Science and Technology is specialized as scientific enquiry that requires the learners to describe, interpret, and explain various steps in the Science process (Ary, Razavieh and Jacobs, 1985).

Cummins (1981:1979) suggests that to understand any academic subject matter, students have to be more than proficient in their English

communication skills. He further explains that students may be proficient in the general conversational English skills, or as defined by Cummins (1981), the basic interpersonal communication skills (BICS), but they may lack the necessary cognitive academic language proficiency (CALP) to learn Science or any other subject matter.

Linguistic theorists (Rosenthal, 1996; Spurlin, 1995; Krashen and Biber, 1988; Cummins, 1979) describe CALP as the type of language proficiency needed to enable students to learn a context reliant subject, which usually relies heavily on oral explanations of abstract and complex ideas, which is often the way in which Science in schools is taught.

Students are likely to benefit from instruction that targets unfamiliar words, expressions and syntax (Laplante, 1997) as ordinary words and phrases, more often assume a different meaning in content subjects (Nation, 2001; Thompson and Rubeinstein, 2000). One of the ways to improve the understanding of Science discourse and texts in the classroom and to learn about the specific sentence structures, lexis and grammar, is to get the students to engage with the data or texts (Tognini-Bonelli, 2001). This would require most immediately, the creation of a specific database or corpus.

EST RESEARCH

There have been many studies on English for Science and Technology (EST) discourse published over the past 50 odd years. Most of them, however, have been centred on the academic discourse in science and technical research articles (Tarone, Dwyer, Gillette and Icke, 1981; Rodman, 1991:1994 cited in Atkinson, 1999, p.197; Myers, 1992 cited in Atkinson, 1999, p.196; Gledhill, 1996; Grabe and Kaplan, 1997 cited in Atkinson, 1999, p.196; Swales, 1998; Marco, 2000; Soler, 2002; Burrough-Boenisch, 2003), with the exception of a few which were carried out on textbook discourse and teaching and learning materials (Barber, 1962; Higgins, 1967; Lackstrom, Selinker and Trimble, 1975;

Kornwipa, Somechon and Cowan, 2001). Most of these studies have been focused on specific grammatical features or lexical items in written academic discourse, whilst the lexicogrammar patterns and relationships have been analysed by a few such as Barber (1962), Higgins (1967), Haliday and Martin (1993) and Swales (1998), whose studies have shown that the language in science has its own unique lexicogrammatical patterns.

The role and structure of grammatical elements in scientific writing have been the focus of substantial research, such as that carried out by Barber (1962) who examined vocabulary, clause-types and the use of non-finite verbs in texts of different genres, that of Lackstrom, Selinker and Trimble (1975), who studied passive-stative distinctions, modal use and use of noun compounds in various scientific materials, and that of Soler (2002) who examined the use of adjectives in scientific discourse. Other researchers have looked into lexical cohesion strategies (Myers, 1992 cited in Atkinson, 1999, p.196), collocations and multi-word units (Master, 1991 cited in Atkinson, 1999, p.196; Gledhill, 1996: 2000; Biber, Conrad and Cortes, 2004) and collocational frameworks (Marco, 2000).

It is no doubt that literature on the study of language used in scientific research articles is substantial and has covered a wide range of areas. However, not much research has been carried out on other types of scientific writing especially, that of scientific English used in textbooks. Even though there have been studies of the verb forms (Barber, 1962; Lackstrom, Selinker and Trimble, 1975) and discourse structure (Higgins, 1967; Trimble *et al.*, 1975) in science textbooks, these areas were looked into in only a handful of studies. Meanwhile, little attention has been paid to the use of semi-technical vocabulary in scientific discourse, which according to Trimble (1985) in his analysis of a scientific discourse, is considered to be one of the most problematic lexical areas for students learning science in English.

SEMI-TECHNICAL VOCABULARY

The vocabulary of science and the technical categories of the lexis of science have been discussed and categorized by many linguists. The most notable categorizations of the lexis of science are by Cowan (1974) and Nation (2001). Both Cowan and Nation had similar categories or degrees of 'technicalness' (Nation, 2001). A summary of Cowan's and Nation's categories are described below:

1. Highly technical words – these are words which appear rarely outside its particular field such as 'epithelial' and 'chromosome' in the science and medical fields.
2. Sub-technical words – these are 'context independent' words (Cowan, 1974, p. 391) which occur with high frequency across disciplines but the majority of their uses with a specific meaning are related to this field. The specialized meaning it has in this field is readily understood outside the field, such as the word 'memory' in the computing field (Nation, 2001, p.199).
3. Semi-technical words – these are words which have one or more general English language meanings and which in technical contexts take on extended meanings.
4. Non-technical words – these are words which are common and have little specialization of meaning, for example 'hospital' and 'judge'.

Trimble (1985) believes that non-native learners do not usually have a problem with highly technical vocabulary as it is taught explicitly by content or core subject teachers. However, learners would face difficulty in comprehending semi-technical vocabulary as these words tend to take on extended meanings in technical contexts. Trimble shows the different meanings the word 'fast' (1985, p.130) assumes in two different scientific fields. In the medical field, 'fast' means 'resistant to' while in the mining field it means 'a hard stratum under poorly consolidated ground'. Due to this nature of acquiring extended meanings, Trimble (1985) feels that semi-technical vocabulary has to be given more focus especially for second language learners (non-native) learning science in English.

CORPUS BASED ON TEXTBOOKS

The importance of textbooks, as a component of science instruction, has been advocated by many researchers (Chiapette, Sethna and Fillman, 1991; Gottfried and Kyle, 1992), in spite of the trend to minimize textbook use in some circles (Ansary and Babaii, 2003). The textbook is and has always been an important aspect of teaching in Malaysian schools. It has become indispensable as teachers depend on them for the provision of tasks and tests for students and the students use them as references.

Though there is heavy reservation against using textbook language as corpus data, as the criticism levelled against it is that it is not naturally occurring language, it should be noted that in Malaysia, the students main exposure to the English language is through formal education and prescribed school textbooks (prescribed by the Curriculum Development Centre of the Malaysian Education Ministry). An analysis of the language in these textbooks would lead to a better understanding of the type of language used to teach science. This would then help teachers to teach science in English and also identify the type of language which should be incorporated into the EST textbook (a subject taught in upper secondary science classrooms in Malaysia).

Research on corpora of language teaching textbooks has enabled the examination of the language to which learners are exposed, and when compared to reference corpora or real-language corpora, has resulted in the development of more effective pedagogical materials (Gabrielatos, 2005). The advantage of a pedagogic corpus is that when an item is met in one text, examples from similar previous texts can be used as evidence for the learner to draw conclusions about that language. In other words, it helps learners to recognize patterns or phraseology particular to that discourse (Hunston and Francis, 2000; Sinclair, 1991). Other than benefiting learners and teachers, a pedagogic corpus would be useful in re-designing teaching materials in the future.

This work is part of a larger study on the language used in secondary school science

textbooks in Malaysia. As there is no existing corpus of the language used in the teaching and learning of science in schools in Malaysia, the researchers started off by creating a corpus of the language used in all the prescribed science textbooks, which are used in the secondary schools (lower and upper secondary) throughout Malaysia. This paper is based on an analysis of prescribed textbooks of all the major science subjects (General Science, Biology, Chemistry and Physics) taught in upper secondary, form 4 and form 5 (ages 16-17 years) classrooms.

OVERVIEW OF THE PRESENT STUDY

This paper explores corpus evidence on the collocation and colligation patterns of semi-technical vocabulary in the upper secondary Science corpus. As semi-technical words are considered to be challenging for students (Trimble, 1985; Nation, 2001) and is a focus area in the Malaysian EST syllabus, an analysis of these semi-technical words would not only help establish knowledge of the type of words which frequently occur and are associated with semi-technical words, but also help to identify some of the phraseology specific to scientific English used in textbooks.

Collocation in this work is taken as the tendency of two or more words that co-occur in discourse which are lexically or syntactically fixed to a certain degree (Schmitt, 2000; Nesselhauf, 2005), while colligation refers to the inter-relationships of words and grammatical items or the grammatical company a word keeps and the position it prefers (Firth, 1957; Hoey, 2000).

Specifically, this work addresses two central questions:

1. What are the collocational patterns found among the selected semi-technical words? and
2. What are the colligational patterns found among the selected semi-technical words?

METHODOLOGY

The methodological base of a corpus research is diverse, as it not only covers the fields of

corpus linguistics but also involves content and discourse analysis in the process of analyzing the lexical and grammatical relationships of words in the text; therefore, it is a combination of quantitative and qualitative analysis. This study examines the science corpus through discourse analysis specifically looking into meaning and form and the interconnection of lexis and grammar through keyword analysis and collocational patterns. The relation between text and context and the interdependence and interrelationships between lexis and grammar is seen in the analysis of collocations, in which words are partially defined or identified by the other words that surround them (Lewis, 1993; Sinclair, 1991).

This study is concerned with data of language used in the prescribed upper secondary textbooks, specifically Form Four and Form Five (upper secondary), and uses corpora to investigate the language of Science.

All the prescribed science textbooks from both the form 4 and form 5 levels used throughout Malaysia were initially edited manually, deleting numbers, formulae and repeated rubrics and sub-headings using a liquid corrector. These texts were then scanned and converted into txt files which were later analysed using the WordSmith version 4.0 concordance software. Each science subject corpus comprised of three textbooks. Therefore, the main Science corpus (combination of the General Science, Biology, Chemistry, and Physics textbooks) comprised of 12 textbooks.

Wordlists of each subject and a wordlist for the entire Science corpus were created. Table I displays the composition of each sub-corpus and the main Science corpus.

As the main method of examining words in this work is through keyword analysis using the WordSmith Tools 4.0, there is a need to have a suitable reference corpus. This keyword function provides a glimpse of what the text is about as the list is based on unique words that are frequent in the text (Reppen, 2001). WordSmith tools finds keywords by first generating frequency sorted word lists for the reference corpus and then for the research text/s. Each word in the research text is then compared with its equivalent in the reference text and the programme decides whether there is a statistically significant difference between the frequencies of the word in the different corpora. The requirement for a word list to be accepted as reference corpus by the WordSmith tools software is that it must be larger than the study corpus.

For a reference corpus to be selected, it should be five times larger than the study corpus (Berber-Sardinha, 2006). As the main Science corpus in this study has half a million words, a reference corpus of at least 2.5 million had to be selected. As there was no readily available corpus of about 2.5 million words on the English language used by Malaysians, the researchers decided on the 100 million word British National Corpus (BNC) as it is an established and reliable (Scott, 2001: 2002) corpus. As the English used in Malaysia leans more towards British

TABLE 1
Composition of the Science corpora

	Overall file size	Overall tokens (Running words) In text	Overall types (Distinct words)
Main Science Corpus	3,837,525	583,600	14,773
Biology	1,254,926	189,066	8,661
Chemistry	855,958	127,957	5,669
Physics	734,136	115,194	5,583
General Science	992,505	151,383	8,977

TABLE 2
Distribution of technical words in the Science corpus

Total no. of keywords	Non-technical	Sub-technical	Semi-technical	Technical
3113	40%	20%	9%	31%

English, a corpus focusing on British English was sought. The decision to use the BNC as the reference corpus for this study was also based on the procedure advocated and adopted by other analysts (Johnson, Culpeper and Suhr, 2003; Scott, 2000: 2001: 2002; Tribble, 2000). The BNC word-list used in this study was constructed by Scott and downloaded from his web page (<http://www.lexically.net/wordsmith/>).

Each word in the Science corpus is compared with its equivalent in the reference corpus and then the programme (WordSmith tools) decides whether there is a statistically significant difference between the frequencies of the word in the different corpora by evaluating the difference between counts per token and the total number of words in each text. The keyness of a word in this work is based on the log likelihood stats (Scott, 1996, WordSmith keywords Help file). The wordlist is then re-ordered in terms of the keyness of each word. 3113 positive keywords (unusually frequent words in the study corpus in comparison to the reference corpus) were identified. Only positive keywords were extracted as these were keywords which are more unique to the Science corpus.

Based on Cowan's (1974) and Nation's (2001) technical vocabulary categories, coding was then carried out by one of the researchers and an independent coder. The independent coder was chosen based on the criteria that the coder has had experience teaching EST for the past 5 years and was familiar with scientific words and general English language. The coder had also to agree to undergo coding training sessions with the researcher. The researcher involved in the coding was familiar with both scientific English and general English language.

Both the researcher and the independent coder were given a summary of Nation's,

Cowan's and Godman and Payne's description of technical and sub-technical vocabulary to be read and clarified if it contained ambiguous statements. Then, coding of the keyword lists of technical words was carried out in three sessions. Coding differences were discussed and clarified, using concordancing lines of the text concerned and with reference to the *Oxford Advanced Learners' Dictionary* (2005), the *Collins Cobuild Dictionary* (2006), and the *Oxford Dictionary of Science* (2005).

Cohen's Kappa was used to assess inter-rater reliability. The inter-rater reliability was found to be high at 0.83, at $p < 0.001$ with a 95% confidence interval (Cohen, as cited by Orwin, 1994). A 94% agreement between the two coders was also registered. Table 2 presents the distribution of the range of technical words in the Science corpus keyword list.

Once the semi-technical words were identified, the researchers checked each keyword against the individual subject wordlists to extract similar semi-technical words used frequently across the science subjects. Table 3 below presents the list of the similar semi-technical keywords according to keyness in the main Science corpus (combination of all science subjects). The table also displays the frequency in the Science corpus which these keywords are key and the percentage of the frequency of these keywords in the Science corpus against the number of running words in the Science corpus (583,600).

To analyse the behaviour and patterns of the semi-technical vocabulary, the four most key semi-technical words, 'reaction', 'cell', 'pressure' and 'mass', are examined in detail. Immediate 2-word collocations and frequent clusters of these words were extracted and analysed.

TABLE 3
Similar semi-technical keywords used in all four science subjects

Word	Frequency in Science corpus	Freq. % in Science corpus	Keyness
Reaction	1,449	0.25	7,890.78
Cell	1,217	0.21	6,263.06
Pressure	855	0.15	2,675.71
Mass	785	0.13	3,030.36
Nucleus	393	0.07	2,660.92
Volume	434	0.07	1,447.07
Materials	335	0.06	827
Negative	261	0.04	692.92
Function	289	0.05	524.77
Constant	201	0.03	420.63
Positive	213	0.04	294.99
Terminal	96	0.02	246.83
Acts	141	0.02	234.28
Fibre	81	0.01	206.92
Variables	73	0.01	133.33

RESULTS

Reaction

There were common syntactic characteristics found of the immediate 2-word collocations of this word. The collocations consisted of the combinations of 'noun+noun', 'adjective+noun', and 'noun+verb'. The position of the keyword 'reaction' in the 'noun+noun' combinations show that this keyword appeared both in the head and base positions of the collocations, showing the commutability (Cowie, 1981) of this keyword (Fig. 1). Fig. 2 presents a cross section of the concordance lines of 'reaction' in the main science corpus.

The collocations with the word 'reaction' in the base positions – 'displacement reaction', 'chain reaction', 'redox reaction', show a semantic prosody associated with type of processes. Many of these combinations are fixed structures which form common highly

technical compound nouns used in the scientific field (*Oxford Science Dictionary*). Two prosodic groups associated with 'type' and 'degree' were found among the 'adjective+noun' collocational combinations (Fig. 3).

Combinations such as 'chemical reaction', 'endothermic reaction', and 'exothermic reaction' referred to the prosodic group of type while combinations such as 'fast reaction', 'dark reaction' and 'light reaction' referred to the prosodic group of degree. The word 'reaction' was also seen to colligate frequently with verbs in the present tense (Fig. 4).

There was a strong colligational tendency of this word with a range of prepositions, as shown in Table 4 below.

The combinations of the word 'reaction' and the prepositions 'of', 'in', and 'between' seem to be common lexical patterns in this scientific discourse.

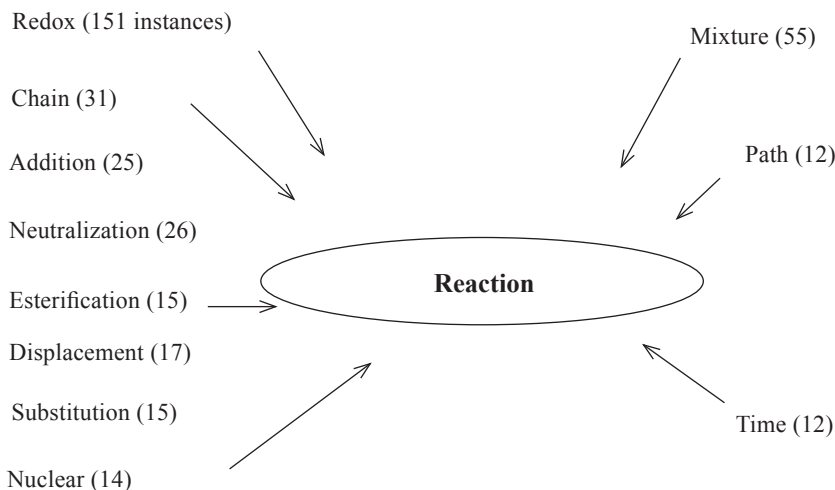


Fig. 1: Noun+noun combinations of the word 'reaction'

4	the leg to swing forward Calculating reaction time Rest the elbow on a table
5	Use the following equation to calculate reaction time Distance Reaction time
52	reactant product how the chemical reaction progresses as time passes
53	language support The chemical reaction progresses means the chemical
54	progresses means the chemical reaction moves forward or onwards The
55	or onwards The progress of a chemical reaction Progress of reaction particle of
348	of fat molecules The esterification reaction between fatty acids and glycerol
370	fuels Burning fuels involves a redox reaction An oxidizing agent oxidizes a
371	a substance It is reduced in the redox reaction A reducing agent reduces a
372	a substance It is oxidized in the redox reaction Oxidation and reduction in

Fig. 2: Cross-section of the main Science corpus concordance lines of the word 'reaction'

Cell

There were similar lexical patterns shared among the collocations of 'reaction' and 'cell'. The syntactic characteristics of the collocations of the word 'cell' were similar to that of the word 'reaction' except with fewer 'noun+verb' combinations (shown in Figs. 5-8). Fig. 5 presents a cross section of the concordance lines of 'cell' in the main science corpus.

Similar to the semantic prosody groups found in the collocations of the word 'reaction',

the prosodic group associated with 'type' was found among the noun+noun and adjective+noun combinations – 'plant cell', 'animal cell', 'sickle cell' and 'dry cell'.

These collocations could be assumed to be free collocation combinations, if it based on the criterion of commutability (Cowie, 1981), as the word 'cell' is seen to collocate with a variety of nouns both in the head and base positions of the collocations (as seen in Fig. 4). For example, the combination 'cell+body' and 'blood+cell' can be seen as a free combination as 'body' also

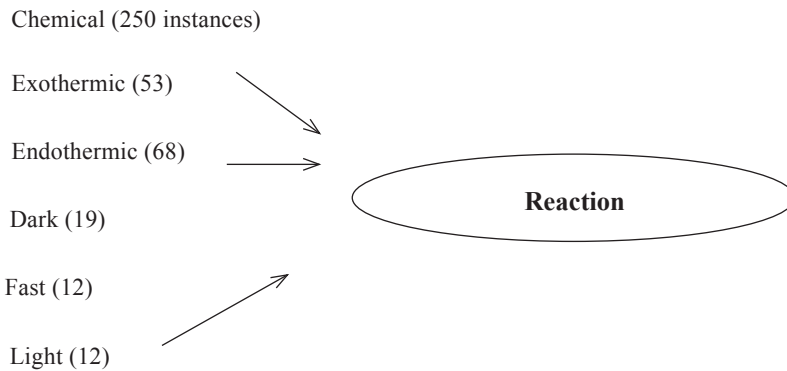


Fig. 3: Adjective+noun combinations of the word 'reaction'

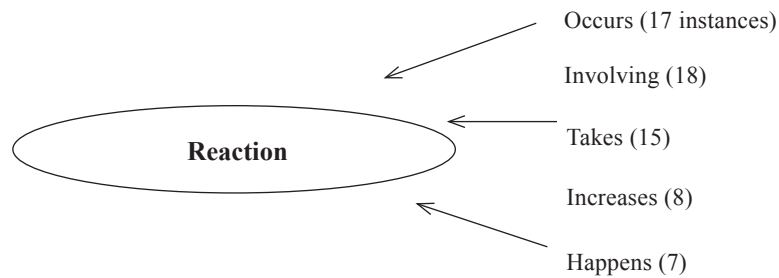


Fig. 4: Noun+verb combinations of the word 'reaction'

collocates with a variety of nouns as in 'human body', 'body pain' and 'blood' collocates with other nouns to form collocations such as 'blood group' and 'animal blood'. Therefore, none of the collocations seem to be restrictive as in the position or use of word; many words seem to fit in any one of those positions.

However, each element in the collocation does not necessarily carry a literal meaning. In fact, many of the elements in the collocations tend to acquire extended meanings. For example, in the collocations 'cell body' and 'blood cell', the elements in both collocations retain its individual meaning, thus, in compound form do not pose a problem in inferring meaning.

However, the collocations 'companion cell' and 'guard cell' are difficult to define or to decode (Master, 2003), as the premodifiers 'companion' and 'guard' do not completely retain their original meanings of 'partner' and 'protector'. According to the *Oxford Dictionary of Science* (2005), the compound 'companion cell' is a type of cell found within the phloem of flowering plants which has a vague function of loading and unloading sugar whilst 'guard cell' refers to the stoma in leaves. Thus, most of the collocations found here seem to fall into the category between free and restricted combinations (Howarth, 1996). This distinction between literal and extended meanings can be further explained by

TABLE 4
Frequent prepositions with the word 'reaction'

Preposition	Head position	Word	Base position
Of	417	Reaction	97
In	10	Reaction	124
Between		Reaction	100
At		Reaction	47
To		Reaction	41
With		Reaction	26
For	6	Reaction	19

14	vessels and tracheids A sieve tube cell has no nucleus Phloem protein
15	in Relation to Transport A companion cell is smaller and shorter than a sieve
16	is smaller and shorter than a sieve tube cell It has a nucleus and many
30	surrounding a stomatal pore A guard cell has a thinner elastic outer wall and a
31	pressure in the guard cells Epidermal cell Guard cell Thin outer cell wall
32	in the guard cells Epidermal cell Guard cell Thin outer cell wall Cytoplasm
15	in Relation to Transport A companion cell is smaller and shorter than a sieve
16	is smaller and shorter than a sieve tube cell It has a nucleus and many
34	a nerve impulse A neurone has a large cell body that contains a nucleus The
35	cell body that contains a nucleus The cell body has threadlike extensions
29	Plants need transpiration Thick inner cell wall Describe the process of

Fig. 5: Cross-section of the main Science corpus concordance lines of the word cell

looking at the various collocations of the word 'cell' which also formed compound nouns.

Many of the collocational combinations which formed compound nouns with similar syntactic characteristics or lexical patterns (noun+noun and adjective+noun) did not have similar semantic associations. For example, the compounds 'dry cell', 'voltaic cell', and 'chemical cell', all have similar syntactic characteristics of 'adjective+noun' with the keyword 'cell' holding the base position in all three combinations. A learner could assume or as Hoey (2007) states, learners could prime that these combinations are a type of cell or have the properties of 'chemical', and 'dry'. However, this priming would be inaccurate as 'dry cell' is a

type of cell (battery), 'voltaic cell' is a device and 'chemical cell' relates to the chemical reaction of the cell (*Oxford Dictionary of Science*, 2005).

In the compounds 'cell body', 'cell walls', and 'cell membrane', the keyword 'cell' maintains the head position thus behaving as a premodifier of the base word. If general English language grammar rules are used to infer the meanings of these compounds, they could be understood as a type of body or type of wall. However, this transfer of grammar rules cannot be applied. Only the compound 'cell membrane' is a type of membrane as 'cell' modifies 'membrane'. Nonetheless, in the compounds 'cell wall' and 'cell body', the words 'wall' and 'body' are postmodifiers to the word

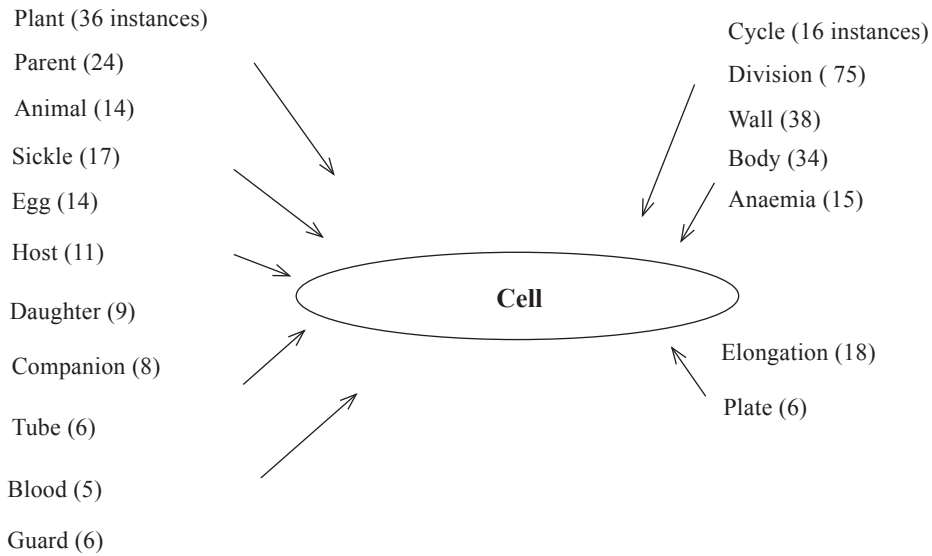


Fig. 6: Noun+noun combinations of the word 'cell'

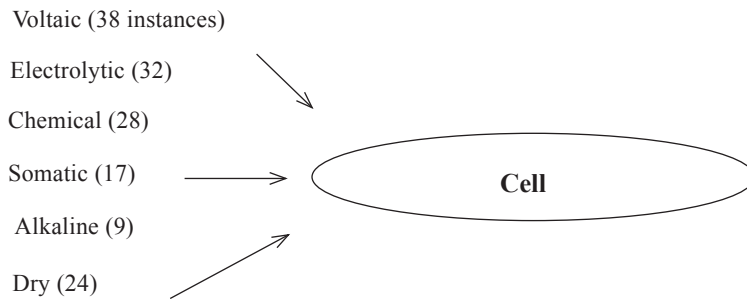


Fig. 7: Adjective+noun combinations of the word 'cell'

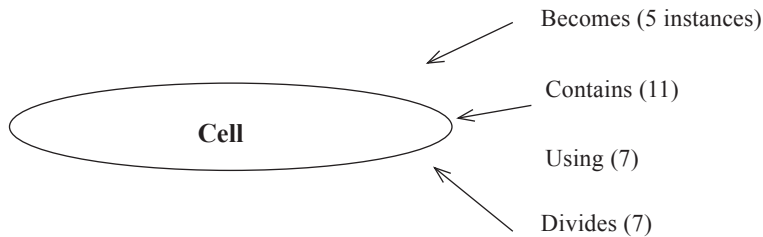


Fig. 8: Noun+verb combinations of the word 'cell'

TABLE 5
Frequent prepositions with the word 'cell'

Preposition	Head position	Word	Base position
Of	55	Cell	13
In	12	Cell	23
To		Cell	31
With		Cell	12
From	5	Cell	6
During	10	Cell	
By		Cell	7
For	6	Cell	

'cell', thus bringing about the meaning, 'a part of the cell' – the wall of the cell, the body of the cell.

In another more technical and complex example, the compounds 'daughter cell' and 'parent cell' have the syntactic combination of 'noun+noun' and the premodifiers- 'parent' and 'daughter', come from the same semantic family. Both could be assumed to be types of cell, which is not incorrect, but by definition (*Oxford Dictionary of Science*, 2005), 'parent cell' refers more to the use or purpose of the cell rather than the type of cell while 'daughter cell' is a type of cell which exists due to a process or reaction. Once again general English language grammar rules cannot be applied directly to the language used in Science. Similar to the colligational patterns of the word 'reaction', the word 'cell' was also seen to colligate (though not as frequent) with verbs in the present tense – 'becomes', 'using' and 'divides'. There were colligational tendencies with a range of prepositions, as displayed in Table 5 below.

Pressure

Once again, there were repeated similar lexical patterns among the collocations with the syntactic characteristics of 'noun+noun', 'adjective+noun' and 'noun+verb' as presented in *Fig. 10* below. However, there were less variety of collocations

compared to the collocations formed by the words 'reaction' and 'cell'. *Fig. 9* presents a cross section of the concordance lines of 'pressure' in the main Science corpus.

Two semantic prosodies found among the collocations were the prosodies, type, and degree. As observed before, the semantic prosody associated with type was found among the 'noun+noun' and 'adjective+noun' combinations whilst the prosody associated with degree was found among the 'adjective+noun' combinations.

The collocations formed by the word 'pressure' seem to be more restricted compared to the collocations of the previous two keywords, as most of the nouns in these collocations seem to be in the head position followed by the keyword 'pressure'. There was only one frequent combination 'pressure cooker' with the keyword in the head position. The verbs which colligated with this word were both in the present and past tenses with most of them being lexicalized verbs or verbs which carry contextual meanings. There was colligational tendencies with prepositions but with a smaller set of prepositions such as 'of' (163 instances), 'in' (19 instances), 'on' (23 instances), and 'to' (19 instances). Only the prepositions 'of' and 'in' appeared in both the head and base positions of the collocations.

12	when the blood reaches the veins the pressure produced by the heart is
13	and press on the veins The blood pressure increases forces open the
14	to beat faster An increase in the partial pressure of carbon dioxide in the blood
15	it important to maintain a normal blood pressure level It should be less than
53	relaxes and vice versa Fast air flow Low pressure aerofoil Slow air High pressure
54	flow Low pressure aerofoil Slow air High pressure Wing as an aerofoil What will
59	body temperature and the osmotic pressure of blood To study human and

Fig. 9: Cross-section of the main Science corpus concordance lines of the word 'pressure'

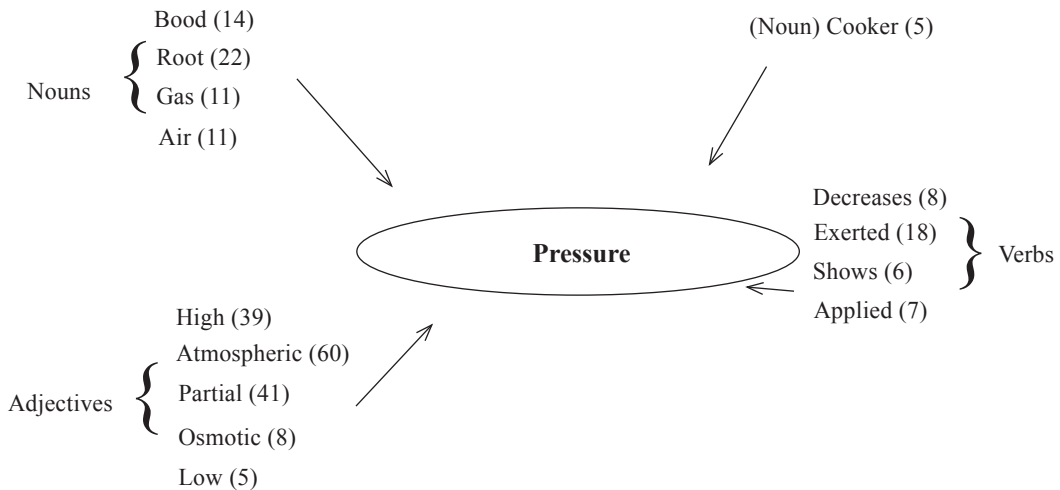


Fig. 10: Various syntactic combinations of the word 'pressure'

Mass

The common shared lexical patterns of 'noun+noun' and 'adjective+noun' were also found in this set of collocations (Fig. 12). However, there were no frequent 'noun+verb' combinations computed. Fig. 11 presents a cross section of the concordance lines of 'mass' in the main Science corpus.

Only one semantic prosody associated with type was found among the 'noun+noun' and 'adjective+noun' combinations – 'body mass', 'bone mass', 'atomic mass', 'molecular mass'. Some of the collocations formed could be assumed to restricted collocations

which are genre specific as the elements in the collocations do not carry a literal meaning but acquire extended meanings which are technical in nature. For example, the collocations 'mass number', 'critical mass', and 'atomic mass' are difficult to decode as the postmodifier 'number' and premodifiers 'critical' and 'atomic' do not completely retain its general English language meanings. The compound 'mass number' refers to a measurement specifically the number of nucleons in an atomic nucleus of a particular nuclide, 'critical mass' refers to the minimum mass of fissile material and 'atomic mass' refers to a unit of measurement (Oxford Dictionary of Science, 2005).

1	is a disease in which bone mass is reduced and the bones become
2	and jogging will also increase bone mass We are unaware of how the
20	of accuracy desired Explain what dry mass is Growth Curves Growth curves
21	such as length height fresh mass or dry mass against time The
116	Nuclear Energy of the atomic mass unit or is mass of the carbon atom
123	this oxidation is transmitted to a known mass of water and the corresponding
124	for food leads to a severe loss of body mass Anorexics are ten times more

Fig. 11: Cross-section of the main Science corpus concordance lines of the word 'mass'

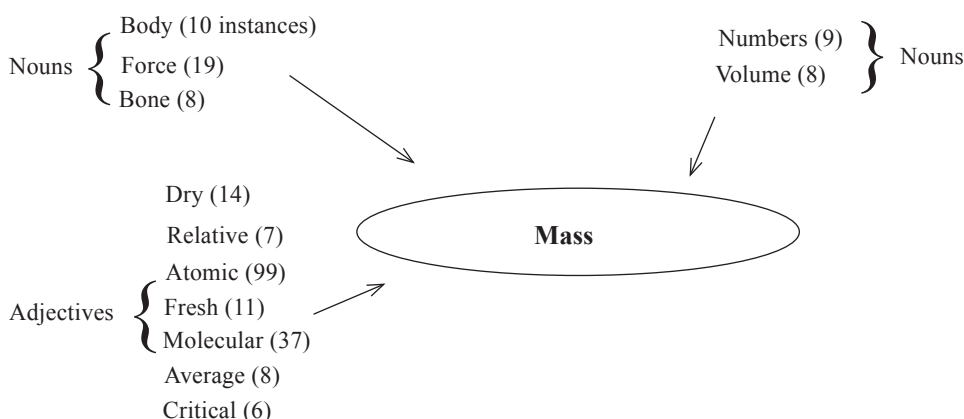


Fig. 12: Various syntactic combinations of the word 'mass'

What should be noted is that many non-technical words such as 'number', 'critical', 'fresh', 'dry' have turned into more technical words with extended meanings attached to them when in compound form. These compounds now acquire extended meanings more specific to the scientific field and are more technical in hierarchy. This has enormous pedagogical implications as the core subject and EST teachers should explicitly teach these words in context to show the variation in use and meaning.

DISCUSSION

Although the percentage of semi-technical vocabulary found in this Science corpus was small (9%), this is a known problematic area (Herbert, 1965; Trimble, 1985) which needs to be focused upon in the classrooms. This work

supports Trimble's (1985) conclusion on semi-technical words being confusing and containing layers of complexity which would pose a problem to second language learners learning science in English.

The analysis of the semi-technical words generated many chunks and collocations which are found to be common and significantly used in the prescribed science textbooks. There are common lexical and grammatical patterns, the most common being the 'noun+noun' and the 'adjective+noun' combinations. The combinations with the same grammatical pattern seem to share aspects of meaning. This study found the semantic prosody of type was realized by the grammatical patterns of 'noun+noun' and 'adjective+noun' whilst the semantic prosody of degree was realized by the 'adjective+noun' pattern. These patterns could be taught to

students so as to prepare them for possible collocations, once the prosodic group has been identified. The pedagogical implication is that some sense and grammar patterns can be focused upon more than others.

The analysis on the four semi-technical words also show that the collocations of these words very often form compound nouns and multi-word units which do not retain the literal meanings of the elements in the combinations, but rather acquire extended meanings which were more technical and genre specific. The observation by Trimble (1985) and Thirumalai (2003) that the language of science is riddled with multi-word units and compound nouns which are complex together with the findings in this study, reinforce the importance of identifying collocational patterns in a science corpus.

Students need to understand why general English language rules cannot be applied all the time to infer meanings of compounds such as in the compounds 'cell body', 'cell wall', and 'cell membrane'. They need to understand the different meanings of these compounds and why even though they share similar syntactic characteristics, the flexibility of some combinations is arbitrarily blocked by usage, thus becoming genre specific collocations.

Currently, the exposure given to the upper secondary students in Malaysia on compound nouns is via the prescribed English for Science and Technology (EST) textbooks. The current EST textbooks deal with compound nouns only at the introductory level with exercises requesting students to either identify compound nouns or define them through pair exercises or form compound nouns either by inserting the 'ing' form and affixes. None of these exercises are able to explain the complexity of compound nouns in science and explain the extended meanings acquired by many of them.

CONCLUSIONS

This study has shown that scientific English lexis and phraseology, especially the ones related

to semi-technical vocabulary are significantly different from the general English language as it contains terminology with limited meanings and words which acquire extended meanings. General English language grammar rules most often cannot be used to infer the meanings of compound nouns in Science texts as many of the elements in the 2-word combinations do not retain their literal meaning but instead acquire extended meanings more specific to the scientific field. However, the phraseology and patterns identified should not be over-represented. Students should be informed of the typical patterns but be reminded of the diversity and flexibility of these patterns in scientific discourse.

An effective way for learners to increase their active vocabulary is for them to be centrally involved in the learning process (Tognini-Bonelli, 2001; Nation, 2001). In the learning and acquisition of specialized or technical vocabulary it is important to develop vocabulary in a systematic way rather than by incidental learning. Through exposure to the collocational and colligational patterns of words, learners will be able to understand how words are formed and the type of structures they appear in. This knowledge will then allow them to develop their own strategies for inferring meanings from context.

The analysis on the four semi-technical words showed that these words were not used similarly and with the same meaning across the four Science subjects. The words were often used with extended meanings attached (not as used in general English language contexts) to them, especially in compound form. This proves the enormity of learning semi-technical words and importance of understanding the variation in the meaning of the words. These types of words should be focused upon and taught or given more exposure by the EST and content teachers so that students are aware of the differences in meaning and use of the words. This study has shown the importance of being aware of the variation in language especially in specialized and academic texts. Corpus-based research has allowed us to

answer many questions concerning language formation. Instead of telling learners ‘it depends’ on the context or sentence, corpus driven data can show ‘what it depends on’.

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Privacy and Housing Modifications among Malay Urban Dwellers in Selangor

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ABSTRACT

This research examined the privacy needs of the Urban Malays in Malaysia and focuses on the medium cost two-storey terrace housing typology. The literature review indicated that low priority was given for privacy in the traditional Malay society which emphasises more on community intimacy, which subsequently influences their housing design. The National Economic Policy in the 1970s encouraged the rural-urban migration among the rural Malays, which indirectly changed their way of lives and their housing environment, especially when many of these new migrants lived in terrace housing. An earlier study indicated that the earlier generations have maintained their cultural values, while there are studies which show that neighbourhood ties among the urban Malays are weakening and family privacy has become more important. This study involved 401 respondents, selected at random from among heads of households living in Selangor, Malaysia. Two areas involved in this study, namely Gombak and Kajang in the district of Hulu Langat, were selected at random. The survey method using questionnaire and in-depth interview with selected respondents were employed to examine the meaning of privacy and the influence of privacy on housing modifications. The findings indicated that the meanings of privacy were influenced by their cultural norms and religious belief, which were unlike what was being practiced by the traditional society and in the village housing setting. The study also revealed that the privacy provided by the original designs was not sufficient and that the need to provide privacy is one of the main reasons for housing modifications.

Keywords: Privacy, culture, urban Malay, housing modifications

INTRODUCTION

Privacy is a two-way process involving the permeability of boundaries between oneself and others. It is an on-going process which involves the process of regulation. Successful regulation is important in the process of achieving privacy. Two types of privacy, regulating mechanisms as posited by Altman (1977), are behavioural and environmental mechanisms. Behavioural mechanisms include verbal and non-verbal

behaviour and they are influenced by socio-cultural factors. People in all cultures engage in the regulation of social interaction through behavioural mechanisms by which accessibility is controlled and is probably unique to the particular physical, psychological and social circumstances of a culture (Ahmad Hariza and Zaiton, 2008).

There are three environmental mechanisms, namely, territoriality, clothing, and personal space, as described by Altman (1977). There are

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three types of territory, depending to how central a territory is to a person or a group or how close it is to their everyday lives, namely primary, secondary, and the public. Primary territories are owned and used exclusively by individuals or groups, and these can be clearly identified as theirs by others, are controlled on a relatively permanent basis, and are central to the day-to-day lives of the occupants. The exclusivity of the primary territory is emphasised by Brower (1965) who refers to it as personal territory. In Altman's (1977) framework, primary territories are powerful privacy-regulation mechanisms. Here, privacy has a string of environmental components in it, where space preferences, expectation and satisfaction, can be influenced by the physical environment (Gifford, 2008). Within the context of housing, privacy is seen in relation to the family (self), the house (environment) and interaction between the two. As a primary territory, a house provides the desired privacy to a family but how much privacy it provides is influenced by the physical characteristics or architectural components of the house, as well as the physical elements and external factors within the neighbourhood.

Privacy in the house is needed at different interpersonal interaction that forms socialization in the house and it is part of the daily primary activities in the house, in concert with other needs to help us adjust emotionally to daily life with other people. Despres (1991) commented that the psychological need for privacy is among the most powerful theoretical concepts that have been used to explain the meaning of home as a refuge. Privacy is needed at two levels, public privacy and private privacy. Public privacy concerns with privacy from the external, between the family and outsiders. It is seen in relation to public distance, or visual privacy at which observation can be effective, in relation to the street and neighbours looking into their garden, and internal spaces of the house. In addition, private privacy concerns with the privacy within the house, as well as between and among family members and their interacting behaviour in the house. Fahey (1995) stated that house is a haven for privacy and the manner in which different

spaces laid out in a house may facilitate or hinder the attainment of a desired degree of privacy (Kaitilla, 1998). The design and arrangement of spaces can concentrate, diffuse, segregate or localise information. Depending on the physical environment, individuals may be visually conspicuous to others or not. Meanwhile, physical elements such as windows, walls, and doors and line of sight created by how spaces are organised are some of the features which hinder or promote visibility.

Meanwhile, the definition of privacy varies not only between but also within cultures (Fahey, 1995). In fact, privacy varies between and within cultures, even within a small social group due to the many influences such as privacy behaviour, values, preferences, needs, and expectations that originate from the differences in personal characteristics, social situations, physical settings, and culture. Attitude towards gender and shame, and possibly the feeling of personal worth, territoriality as well as the place of individual may also affect the attitude towards privacy (Rapoport, 1969). These attitudes vary between cultures and influence privacy behaviour, which is based on one's norms and beliefs. The interpretation of privacy is not only culturally specific, but it may also differ significantly within a given juridical structure (Boling, 1994). It is a subjective response which varies according to individual preferences and various social settings (Margulis, 2003).

Privacy is one of the important cultural factors which influences house forms (Rapoport, 1969). Some cultures have a stronger preference for privacy and more privacy needs and gradients than others (Altman and Chemers, 1980). Abu-Gazeh (1996) stated that the use of space is not isomorphic among the cultures, whereby each culture has specific variables that influence its use of space. Some cultures may appear to have little privacy by the Western standards. Canter and Canter (1971) argued that this could probably be due to the traditional view of privacy as a solely physical-environment process and not a complex behavioural system that draws on many levels of functioning. The need for privacy is universal and it occurs in all

cultures, but the regulating mechanisms utilized can vary considerably across cultures (Fahey, 1995). Thus, privacy can be regulated through behavioural mechanisms such as rules, manners and hierarchies, psychological means such as internal withdrawal and depersonalisation, as well as behavioural cues by structuring activities in time, spatial separation, and the act of using physical elements (Gifford, 2008).

In Islam, the need for modesty is the same in both men and women, but based on the differentiation of the sexes in nature, temperament, and social life, a greater amount of privacy is required for women than for men, especially in the matter of dressing. The subject of sex ethics and manners is the determining factor in the segregation of males and females in the Islamic society. Therefore, the concept of privacy is introduced, perceived, and judged accordingly. In sum, privacy in the house is needed for the concealment of inter-family life from strangers, separation between men and women in sitting arrangement during social interaction, but not for those of the same family, separate sleeping areas for male and female family members and for parents, as well as for daily basic activities. Subsequently, at the public level, the house should provide visual privacy from outsiders and strangers. At the private level, the provision of bedrooms for parents and children of different genders and arrangement of spaces with clear division of public and private spaces are required to ensure privacy for family members during social interaction.

TRADITIONAL MALAY PERSPECTIVE ON PRIVACY

In the traditional Malay society, privacy was not given a high priority compared to community intimacy (Ahmad Hariza, Harlina and Asnarulkhadi, 2009). Meanwhile, the climatic factor and low priority for privacy have shaped the traditional Malay houses, providing comfortable houses which support the activity system of the inhabitants (Zulkifli, 1996; Lim, 1987). The concept of privacy in the traditional Malay society was clearly different from the

western concept. Individual and family privacy did not rate highly in the traditional Malay culture (Vlatseas, 1990). Privacy needs in the Malay society is related to their beliefs, values and norms, which are largely supported by the Islamic family codes, and to a large extent coterminous with the traditions (Zainal, 1995).

The Malay society regards behavioural norms as important privacy regulating mechanisms. The traditional values of *budi* (etiquette) and *bahasa* (language) regulate the behaviour in the close-knit traditional Malay society. The term *budi bahasa* sums up the kind of proper behaviour an individual should display both in the privacy of family life and in public, such as not prying into the private matters of others, giving the salutation and asking for permission before one enters other people's house, not looking into other people's houses, as well as the rules on clothing and interaction. The observation of the accepted behavioural patterns indirectly provides privacy to the community at large. These norms are much in line with morality in Islamic teachings and to this extent, the Malay customs and Islam are in complete agreement (Zainal, 1995). Privacy is very important in Islam and the right to privacy is one of the most precious freedoms, the most comprehensive of rights and the most valued by Islam (Berween, 2002). In the Holy *Qur'an*, it is stated very clearly that one's privacy is one's own right and no one should intervene in it without one's permission. In Islam, privacy and good manners in public contribute to the highest virtues, and are parts of a Muslim's duties. As stated earlier, the subject of sex ethics and manners is the determining factor in the segregation of males and females in the Islamic society. Therefore, the concept of privacy is introduced, perceived, and judged accordingly. In physical terms, privacy refers to the personal clothing and the private domain of the house (Besim, 1986). In the context of housing, providing visual privacy and family intimacy is required for the concealment of inter-family life from strangers, separation between men and women in sitting arrangements during social interaction but not for those of the

same family, separate sleeping areas for male and female family members, for parents and children, and for normal functioning of daily activities. Apparently, the architectural, social, and psychological dimensions of privacy are fundamental to the daily life of Muslim. In order to control privacy in the built environment, architectural and behavioural variables must operate in tandem so as to satisfy psychological needs (Abu-Gazzeh, 1996). Privacy in a Muslim house is directed towards the insulation of the household from outside and non-kin exposure (Tentokali and Howell, 1988).

CHARACTERISTICS OF SPACE ORGANISATION IN THE TRADITIONAL MALAY HOUSE

Space organisation in the traditional Malay house is based on the socio-religious requirement, and with the traditional flexible open-plan solution, various forms of physical and symbolic barriers or boundary is necessary (Mohd Taib, 1997). Spaces are organised into distinctive zonings,

guest zone (public domain with a clear male domain at the front, and the family zone (private domain), which is usually the female domain. The core house, which is the male domain, is always at the front and the kitchen at the back. Other spaces are secondary spaces connecting the core house and the kitchen. The arrangement of spaces provides the convenience for daily activities of the inhabitants, providing the privacy and separation within the household, as well as during social interaction. *Fig. 1* illustrates the layout of a traditional Malay house.

The spaces in the traditional Malay house are always arranged along a linear path, with a clear understanding of how, what and when activities are performed and the importance of the spaces. The sequence of the spaces and their flexible uses complemented and supported the traditional Malay lifestyle. The open plan layout was an expression of the Malay traditional culture and tradition, in which strong family bond, respect for the elderly and defined position of women in the houses (Lim, 1987).

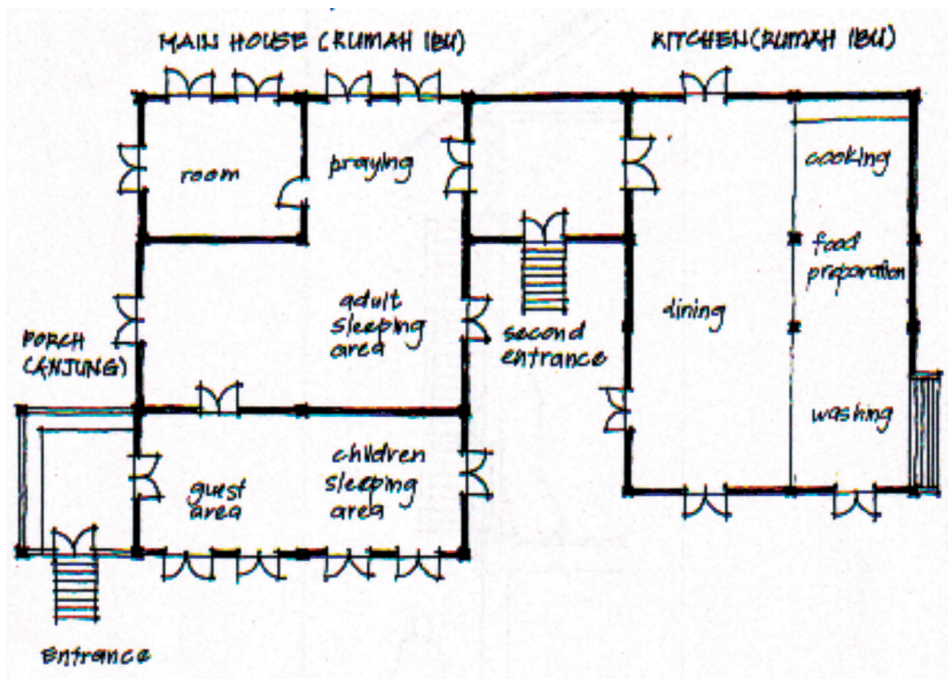


Fig. 1: The layout of a traditional Malay house (Lim, 1987)

On the contrary, the territory of the traditional Malay house is not strictly defined, where external spaces are shared, and trespassing is allowed. In fact, territory is loosely defined by trees and hedges and there is no strict rule on trespassing. Sharing of external spaces encourages interactions among the communities as these spaces act as the social place for meeting and interaction among the people, which eventually strengthens community bond. Within the accessibility and permeability of the traditional Malay house and setting, the privacy of a family is provided within the individual house, and this is supported by accepted privacy behaviour. The lack of a defined territory should not be seen as a lack of privacy, as privacy in the traditional Malay society is not bounded by their physical environment, but more importantly shared societal values, which governed the privacy behaviour among the homogeneous society.

Meanwhile, spaces are arranged to provide convenience and consideration on other cultural aspects such as privacy, separation and social interaction and position of women are parts of the considerations in the design and were translated into the space organisation and the house form in general. Spaces in the traditional Malay house are not defined or specialised for a certain usage, but are multi-purpose. The open interior allows the spaces to be used interchangeably for different purposes at different times of the day and year. The living room is used for sleeping at night with a mat laid out and stored in the morning. The same space is also used for sitting, praying, reading, sewing, entertaining guests and many other activities, as well as occasional activities such as wedding ceremony and gatherings. Eating is normally done on the floor in an area next to the kitchen. The use of furniture is minimal in the traditional Malay house. The staircases in the traditional Malay house signify the entrance point. The main stair located at the front of the house leading to the covered porch is the formal entrance, while the second stair is normally used for the ladies. The stair has a social significance as a sitting place for

informal gatherings among female neighbours and friends. Some houses have a third stair from the kitchen area. Rooms in the traditional Malay houses are limited in numbers, due to the low priority given to individual privacy as compared to family privacy. Moreover, there is no specific rule on the separation of the female and male members in the family in the traditional Malay culture, as promoted by Islam. It is common for young children to sleep with adult members of the family in the living area. Bathing and toilet activities are carried out outside the house, as there is no provision of toilet or bath within the perimeter of the house. A bathing area, which is also where washing takes place, is normally located behind the house, formed by coconut leaves or simple wood walls for visual privacy. Toilet is located at a safe distance from the house and sheltered by a simple structure. The scenario mentioned above is a common housing layout in the village even in the eighties. However, due to development and modernization process, this scenario has changed whereby many have started to adopt the modern housing design and one of it is having toilet and bathroom inside the house.

The National Economic Policy (NEP), introduced in 1971 by the government to solve economic, ethnic, and regional imbalances among the multiracial Malaysians, resulted in rural-urban migration among the Malays. By the late 1970s, the Malays formed the majority (68.3%) of the urban migrants (Malaysia, 1979). Urbanisation has resulted in changes in the way of life of the Malays and housing environment. The housing design in Malaysia, especially in the urban area, has significantly changed from the late 1960s with the introduction of mass housing in the form of terrace housing, which is influenced by the British housing design and typology, where to some extent, there are houses built with chimney. Terrace housing was developed based on the 'efficient' use of setbacks and building-to-building distances for the purpose of natural lighting, wind flow, firebreaks and sanitary services, without much consideration of the local culture (Mohamad Tajuddin, 2003). By the 1970s, terrace housing

became a common sight in the urban areas that were made up of rows and rows of identical terrace houses along the rigid lines of the gridiron.

Unlike the traditional houses, which are located randomly in the village, the monotonous terrace housing units are arranged close to each other in rows without much consideration for both climatic and culture requirements. The residents are confined within the defined boundary of their fenced housing units. The concept of life in a community, as an extension of the family prevalent in the Asian societies, gave way to the anonymous living of housing estates, which still persists until the present day. As housing designs are not in tandem with the changes in lifestyles of the people, housing modification became common and accepted as a Malaysian culture (Ministry of Housing and Local Government, 2004). Due to the high price in land value in the urban area, terrace housing is preferred and demanded as compared to other types of compact housing such as high-rise apartment as it allows room for modification. People modify their houses for many reasons. Some authors have suggested that failure to include cultural consideration, including privacy in the design process, resulted in housing units being modified (Brolin, 1976; Correa, 1989). One of the reasons for housing modification is to achieve privacy as indicated in the studies of Ozaki (2001), Zaiton (2000), Abu Gازه (1996) and Al-Khodmany (1999). One of the weaknesses in the housing design introduced is the lack of social and cultural considerations including privacy. As also pointed out by Salama (2006), in the case of providing affordable housing in Saudi Arabia, Saudi environmental and socio-cultural contexts demand that affordable housing should not merely aim at providing affordable shelters, it should also offer design solutions that are sensitive to the local contexts. Instead, issues such as privacy, social cohesion, and perceptions on residential density, preferences, and the lifestyles of the target populations should be considered in providing desirable, affordable, and sustainable housing.

Therefore, this paper examined how the urban Malays defined privacy and the influence of privacy in housing modifications made to the house that they owned.

OBJECTIVES

The general objectives of this study were to examine on the meaning of privacy from the perspective of urban Malays and to study the relationship between the needs for privacy and housing modification. The specific objectives are:

1. To understand the meaning of privacy in relation to the family (self) and the environment (the house).
2. To identify the building elements affecting the privacy of the Malay families living in medium cost two-storey terrace housing.
3. To examine the influence of privacy on housing modification.

METHODOLOGY

The methods used for the study include interview survey and in-depth interviews. Appropriate sampling of the subjects is of particular concern in the study of privacy as there are many factors that can influence privacy. The subjects were randomly selected from 401 Malay heads of the households in three medium cost two-storey housing locations in Selangor. The two different sizes of housing designs from the two areas, namely Gombak and Kajang, located in Hulu Langat were involved, with the smallest (14' x 55') in Gombak and the bigger units (18' x 70') in Kajang. The two areas were selected at random from the list of districts available in Selangor. Meanwhile, survey mapping was also carried out to identify Malay families who owned and lived in medium cost terrace housing units before selecting the respondents for the study. The Statistical Package for Social Science was used to analyse the data. In-depth interviews involved 12 subjects, who were identified during the survey interviewed and selected based on their willingness to participate in the study.

TABLE 1
Definitions of privacy

Definitions	Privacy perceived by respondents	%
The self	Condition of yourself/ family members to be alone	27.2
	Attitude to control information in the house about oneself, family and property	15.4
	Process of being alone	3.3
Interaction between the self and the environment	Situation or interaction between the house and oneself/ family	30.1
The environment	Condition of the house that allows for you/family members to be alone	24.0
Total N=374		100.0

A set of questionnaire was employed for the household survey. The initial questions included socio-economic variables, such as age, sex, income, education level, as well as the number and age of children, period of residency, and location of unit. The second part of the questionnaire focused on the perception on the definition of privacy, housing design and modification, identifying building elements, which affected their privacy and involved in housing modification.

FINDINGS

There were 401 respondents from three housing areas identified. The male subjects comprised of 40.9% of the total respondents, while the females made up 59.1%. Their ages ranged from 22 to 70 years old, with 74.5% of the subjects aged between 31-50 years old. Meanwhile, the number of children in the families ranged from 1 to 14, with 60.3% of the households had 1 to 3 children and 2.4% others had more than 7 children.

Data gathered from the survey interview indicated that 30.1% of the respondents defined privacy in relation to the interaction between the self and space, followed by the condition of self to be alone (27.2%), and the condition of space

(24.0%), respectively. Privacy is defined as the attitude to control information in the house about oneself, family and property (15.4% of the respondents) and as a process of being alone (3.3% of the respondents).

For a more precise and meaningful definitions, three of the answers, which defined privacy in relation to the self are combined due to the relatively small percentage of the response for an answer. Three of the responses, namely condition of self, attitude of controlling information and process of being alone, represent the definition of privacy in relation to self. Collectively, these responses comprised 45.9% of the responses, as shown in Table 1. Meanwhile, the results from in-depth interview explain the everyday meaning of privacy, which is more relevant to most people and its relation to the self, house, and the interaction between the two. These results are consistent with findings from the survey interview. Even though privacy is seen more in relation to the self, the findings strongly indicate the inclusion of the environmental component in its meaning. Three common definitions of privacy are privacy as control of access from being seen or observed, control of access from being disturbed and the condition of peaceful and quietness within the confinement of the house as the boundary and

TABLE 2
Building elements affecting privacy

Building elements	n	Yes %	No %
Proximity of living and kitchen	400	67.2	32.8
Open plan layout of living, dining and kitchen	400	66.7	33.3
Design and location of the main window in the living are directly facing the main window of front housing unit	398	57.5	42.5
Location of main door directly facing the main door of front housing unit	400	56.5	43.5
Kitchen door directly facing kitchen door of housing unit at the rear	401	54.4	45.6
Proximity of bedrooms	398	37.9	62.1
Position of bedroom doors directly facing each other	400	32.0	68.0

setting for privacy. Control of access involves a range of sensory avenues such as visual, informational, and audio. In general, not being seen, not being disturbed, and the condition of the house were used interchangeably by most respondents to define privacy. Combinations of more than one sensory avenue or conditions were commonly used in defining privacy.

Unlike visual access or social interaction, which can be controlled, noise and smell is difficult to control. The survey interview indicated that noise is a major hindrance of privacy at home, as indicated by 81.7% of the respondents, followed by smell (50.0%) and visual (38.2%), respectively. The in-depth interviews indicate that this type of privacy is hard to achieve due to the close proximity of the housing units in relation to other housing units and external factors. The tolerance attitude of the Malays towards noise from the neighbourhood, especially from children, could be seen where most respondents indicated that they could accept it as a condition, in which they have to live with when living in a housing area.

In terms of housing design, 62.1% of the subjects generally felt that the design of their present housing units does not emphasize privacy. The number of children in the family do not significantly influenced the perception on the lack of privacy, with a chi-square of 1.71, $df = 2$, and a significance level of 0.63. Similarly,

the size of housing units does not significantly influence the perception on the lack of privacy in the housing designs. The majority of the subjects indicated that five of the listed building elements affected the privacy of the subjects, as shown in Table 2. However, higher percentages (67.2% and 66.7%) of the subjects felt that the proximity of living and kitchen as well as the open plan of the ground floor affected their privacy. A low percentage of the subjects felt that their privacy are affected by the position of bedroom doors that are directly facing each other (32.0%) and the proximity of their bedrooms (37.9%).

The findings from the interview indicated personal privacy is not seen as important, therefore the proximity of bedrooms and location of bedroom door facing each other is not seen as affecting family privacy. However, they felt that the arrangement of the existing doors and windows in their housing units affected their privacy and they regulated privacy by closing the door and used curtains to provide visual privacy to the family (see Ahmad Hariza *et al.*, 2006). Most of the respondents having units with louver windows in the bedrooms and kitchen area are satisfied with this type of window as it provides good ventilation, natural lighting and visual privacy.

Majority of the respondents involved in this study have modified their houses (64.3%). However, 76.1% of the subjects (including both

TABLE 3
Building elements involved in housing modification

Housing modifications	n	Yes %	No %
Changing the main door to avoid direct view into the house	400	34.3	75.7
Separating living and kitchen/dining area	401	61.8	38.2
Addition of bedroom	401	52.1	47.9
Change window/sliding in the living area door to avoid direct view into the house	401	40.4	59.6
Changing the windows to avoid direct view into the house	401	30.2	69.8
Changing the fencing around the house	401	48.9	51.1

who have modified or will modify their houses) agreed that privacy is one of the main reasons for modifying their houses. The results indicate only two out of the seven building elements listed in the questionnaires scored higher than 50% (see Table 3). The two elements are separating the kitchen from the living area (61.8%) and the need to add more rooms (52.1%). Even though the location of main door and windows was found to affect privacy, only 34.3% of the respondents changed the main doors, while 30.2% others changed the windows. This is explained by the fact that the subjects regulate their visual privacy by the use of curtains and closing the main door most of the time.

The data from the in-depth interviews indicated that housing modification was heavily influenced by the economic factor, separating the kitchen from the living area, therefore allowing the family (particularly the female members) to do their activities in privacy even during the presence of guests. It is also important that the kitchen, which is a private area and the 'back region' where a lot of daily activities take place, is concealed and not visible from the living area which is considered as the public area of the house. The second modification normally involves extending the living area to provide a comfortable space where a degree of separation between male and female during social interaction is provided, even within the same living area. In some cases, extending the living area provides a new guest area, where

guests are entertained and restricted to, and therefore freeing the existing living for family activity. The third modification normally involves addition of family area for multi-purpose use and bedroom on the first floor.

The third bedroom is usually very small. In cases where it is located on the ground floor, it is normally not used for sleeping. Young children normally sleep in the parents' bedroom. Another bedroom is added on the first floor when the children reach adolescent to provide separate sleeping area for daughters and sons. However, in family with only daughters or sons, the need to have additional room does not arise.

Windows and sliding door are normally left opened for ventilation and lighting purposes. Most houses have steel grille on their windows and doors for security reason; therefore, the windows are left open during the day. Visual privacy is achieved by the use of light curtain. The needs for ventilation and visual privacy are considered when houses are modified. The existing windows are normally changed to tinted glass casement window or sliding door. This type of window allows view out but not in. At the same time, tinted glass reduces direct sunlight into the house. Most of the subjects felt that louver window is good for ventilation and therefore, the existing louver windows in the kitchen and bedrooms are maintained.

CONCLUSIONS

Privacy, in relation to housing among the Malays living in terrace houses, is seen in relation to the self or family more than anything else. However, there is a strong emphasis on the environmental component of the house as privacy setting and boundary within which family privacy is afforded. Privacy is seen within the internal and external boundary of the housing units (the house and the external space). Unlike the traditional setting, privacy boundary is well-defined (within the external boundary of the house) due to the housing setting of the terrace housing, which defines the territory of the housing unit by physical boundary of fencing. This finding indirectly suggests the influence of the built environment on the changes in the definition of privacy in the Malay culture.

The emphasis on family in the definition of privacy indicates a change of attitude towards privacy that was seen in the traditional society, which emphasised on community intimacy. While definition of privacy among the Malays living in the housing areas is subjective, shared meanings are consistent with religious belief and cultural norms. The influences of Islam and cultural norms could clearly be seen on the rules of clothing or dressing in defining visual privacy, neighbourhood ties and tolerance towards the neighbours, which influence privacy as not being disturbed, and condition for privacy. Meanwhile, the behavioural norms, both inside and outside the house, provide privacy at private and public levels and promote family privacy within a community. The fact that neighbours are not considered as a hindrance of privacy indirectly suggests that the community still has a strong influence in defining privacy in the present Malay society.

The findings from the study indicated that the design of terrace housing affects the privacy of the Malay family more at the public level than at the private level. Even though visual privacy is affected by the design of windows and doors, the ability to regulate privacy by the use of physical elements, such as curtain and behavioural mechanism of closing the door most of the time, provides the needed privacy.

The arrangement of spaces, which disregards the need to clearly separate public and private spaces, affects privacy in the house during the presence of outsiders but not within the family. The importance of separating kitchen, which is a private area, from the living or the public area of the house, can be seen from housing modification.

Housing designs should consider social and cultural needs of the residents, including privacy, which have always been important considerations in the traditional house forms. A clear understanding of the division between the public and private spaces should be taken as parts of the design considerations, which would minimise housing modifications. Meanwhile, the design of windows should include provision for ventilation as well as privacy to the residents, such as the use of tinted glass windows, adjustable louver window, etc. and careful positioning of windows. While house units can be arranged in rows, mirror image arrangement should be avoided. More units can be arranged around open spaces rather than facing each other.

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Preparedness of Malaysian Pre-school Educators for Environmental Education

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ABSTRACT

The shaping of attitude and values, commitment and skills needed to preserve and protect the environment of individuals begins at an early age. Hence educators especially pre-school teachers play an influential role in developing new patterns of behaviors of the young to adopt a sustainable lifestyle. A study was conducted to assess the level of preparedness of the pre-school teachers in Malaysia with respect to their degree of concern for environmental issues, comprehension of fundamental environmental knowledge, and level of adoption of sustainability practices. A cross-sectional research design utilizing survey method was conducted among 300 pre-school teachers representing three different types of pre-schools in Malaysia. Data indicated that the respondents were aware of various basic environmental problems faced by the country but less of the advanced environmental issues. They were found to be more concerned regarding other social problems as compared to environmental ones and adoption of sustainable consumption practices of respondents was modest. Comprehension on fundamental concepts of environment and sustainability needs to be enhanced further through formal training as the main source of environmental knowledge was acquired through the mass media. The study shows that it is imperative for various stakeholders, in particular the Ministry of Education, to develop suitable environmental education syllabus for pre-school teachers training and in-service training programs in order to enhance their preparedness for environmental education.

Keywords: Environmental education, pre-school teachers, sustainability, environment

INTRODUCTION

The Brundtland Commission in 1987 and consequently the formulation of Agenda 21 in 1992 had set an impetus for global community's inquest for environmental stewardship that encompasses various intergovernmental, governmental, and civil society initiatives. An array of summits, conventions, guidelines, and programmes has been developed at an international level to ensure conservation, preservation, and protection of our planet. In spite of these efforts, a recent review by United Nations indicated that we may face an inevitable

crisis of climatic change that threatens the world's ecological systems and human well-being if the present production and consumption trends continue (UNEP, 2008).

Malaysia, which is at an intermediary stage of development, is facing tremendous challenges in decoupling economic growth from environmental degradation. As in other industrialized and urbanized countries, the economic growth of the country has been accompanied by pollution and other environmental issues. The principles of sustainable development have been introduced in the national development plans

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since the Third Malaysia Plan (1976-1980) and they have been reiterated in the subsequent development plans. Despite the enactment of various environmental acts, regulations and policies, the data indicated that there was a downward trend of the environmental quality in the country. For instance, the report from the Malaysian Quality of Life 2004 indicated that the quality of life in Malaysia improved during the period from 1990-2002, as reflected by the upward movement of the Malaysian Quality of Life Index (MQLI) by 9.8 points (Base year 1990 = 100 points). All the components of the MQLI recorded improvements, except for public safety and environment. On the contrary, the quality of the environment as measured by air quality, water quality and forested land, declined by 1.8 points during the 1990-2002 period.

The root causes of the environmental problems are the unsustainable patterns of consumption and production, many of which are unaffected by environmental laws and regulations only. Hence, promoting adoption of sustainable consumption and production is one of the principal responses to protect the environment and enhance human well-being. The studies by various scholars (e.g. Schulitz and Oskamp, 1996; Mansaray and Ajiboye, 1998) indicated that the quality of the environment is significantly dependent on the level of knowledge, attitude, values, and practices of the people. One of the ways to achieving this goal is through environmental education (EE). EE has been identified and recognized as one of the most important tools in promoting sustainable lifestyle in Agenda 21, which is a global action plan for delivering sustainable development. The significance of environmental education is further attested at the 2002 Johannesburg Summit, where the Decade of Education for Sustainable Development (DESD) was proposed. The United Nations General Assembly in her 57th session in December 2002 endorsed and proclaimed that the Decade of Education for Sustainable Development (DESD) is from the year 2005-2014. The goal of the DESD is to integrate the principles, values, and practices

of sustainable development into all aspects of education and learning.

Subsequent to the First International Conference on Environmental Education held in Belgrade in 1975, the Government of Malaysia has developed a national policy on EE (ASEAN EEAP, 2000). EE across curriculum (not taught as a single subject but incorporated into each subject from Science to Religious Studies) has been introduced to both primary (age 7-12 years) and secondary schools (age 13-17 years) since 1986. The Government further intensified EE in the Seventh Malaysia Plan (1996-2000) to include broad base campaigns through the mass media to encourage the life-long process of environmental education, infusing formal environmental education in school curriculum, incorporate environmental education subject in teachers' training syllabus, establishment of research center for environmental health, and active participation of both the public and private sectors including non-governmental organizations in promoting environmentally responsible practices. Although the pre-school system in the country was established in the 1920's, it was only in 2003 that a National Pre-school Curriculum was introduced and EE is incorporated in creativity and aesthetic component (MOE, 2003).

BACKGROUND OF THE PRE-SCHOOLS IN MALAYSIA

In Malaysia, early childhood development is provided by two institutions, namely the childcare centre and pre-schools. The pre-school is a non-formal education programme catering for children aged four to six years. At the outset, it was the religious group that started informal nursery centres at the mosques (for Muslims) and churches (for Christians) in the 1920s. In the 1960s, the government agencies such as such Community Development Division (KEMAS) of the Ministry of Rural Development and Federal Land Development Authority (FELDA) started pre-schools targeting the under-privileged children particularly in the rural

areas with minimal fees. The private pre-schools are mainly concentrated in the urban areas, catering for children from middle to high-income families. The fees charged by these pre-schools vary and are largely determined by overhead costs and market forces.

There has been a steady growth of pre-school centres in the country and the number of children enrolled in those centers has increased from 253,675 in 1995 to 399,980 in 2000, which accounted for 68.7% of children aged between four to six years (Azizah, 2004). Thus, there is a steady increase in gross enrolment ratio (GER) over the years and if this trend is sustained, Malaysia is expected to achieve a 100 per cent GER in a few years' time (EFA, 2000). At present, pre-schools are managed by three main providers, namely the Government agencies (Ministry of Rural Development and the Ministry of National Unity & Community Development), the Ministry of Education and private enterprises. With the formulation of Education Acts 1996, the Ministry of Education (MOE) established a pre-school programme that was integrated within the formal school system of the country in 2001. Pre-school classes conducted by the MOE and other government agencies have enabled under-privileged children in the urban and rural areas access to pre-school education for free or at a minimal charge.

Although the Ministry of Education (MOE) does not fund and operate all the pre-schools in Malaysia, it has the responsibility of preparing the pre-school curriculum for all. In addition, MOE is also in charge of the registration of pre-schools and conducts teacher training programmes. All the pre-school centres have to abide by the National Pre-School Curriculum set by the MOE and the teachers are required to attend formal training or a special course before they can teach. In view of the fact that the standardization of the pre-school curriculum was only implemented since 2003 and with no standardization and uniformity in the educational and training background of the teachers, the implementation of the syllabus in general and EE specifically is somewhat uncertain. An assessment conducted by Pudin and Tagi (2003)

found that successful implementation of EE in schools in the country is greatly dependent upon the commitment, efforts, and level of enthusiasm of teachers. In this vein, this study was conducted to gauge the preparedness of the pre-school teachers as early childhood development programmes are instrumental in preparing the nation's young to participate in sustainable development of the nation.

LITERATURE REVIEW

Despite the many efforts in the past 20 years, EE is still a largely inadequate, relatively inconsistent, and scattered presence in curriculum (Hungerford and Volk, 2003). However, of late, there seems to be an increasing interest in the early childhood EE, whereby sustainability principles are beginning to be incorporated into its education philosophies, theories, and practices (Davis, 1998). Although EE in Malaysian schools started as early as in 1986, it was only in 2003 that the elements of EE were included in the Malaysian National Pre-School Curriculum. This is a step in the right direction as EE at early childhood level is important.

Scholars have recognized that environmental experience in the critical phase of the early learning years can determine subsequent development in environmental behaviour (Azizah, 2004; Wilson, 1996; Stapp, 1978; Palmer, 1999). This acknowledgment has led to significant development in EE, whereby it has been incorporated into the curricula for young children in preschool and elementary school classrooms worldwide. Meanwhile, studies have shown that this stage represents the formative years where thinking and feeling about the environment occur, and that it will endure passage of the years (Palmer, 1999). Unless children develop a sense of respect and caring for the natural environment during their early years, they are at risk of never developing such attitudes later in life (Stapp, 1978; Tilbury, 1994). The findings from studies conducted by Palmer (1999) among 2000 adults in 14 countries indicated that childhood direct experiences with nature were the most

important factors influencing their present concern for the environment. Hence, the early phase of childhood is a fundamental period for the formation of environmental learning and attitudes (Basile, 2000).

School represents important contexts in which young children learn about behaviours and develop attitudes that are appropriate for the culture in which they live (Bronfenbrenner, 1986). Therefore, early childhood education represents a significant platform for nurturing environmental sensitivity among the young. It was also found that teachers exert considerable influence on the children (Domka, 2004). Moreover, it was demonstrated that teacher's attitude, knowledge, and behaviour towards the environment affect and influence the students' attitude (Summers, 2000; Bradley *et al.*, 1999). In view of that, the teachers need to be prepared and equipped with all relevant psychological, cognitive, and social skills in order to successfully impart EE to the young.

The ultimate goal of environmental education is to produce a citizenry that is knowledgeable concerning the biophysical environment and its associated problem, aware of how to help solve these problems, and motivated to work towards their solutions (Stapp *et al.*, 1969; Tbilisi Conference Declaration 1977). By and at large, this can be facilitated through typical curriculum content where teaching the theory to address this requirement must receive prominent placement in curricula (Arvai *et al.*, 2004).

The content of EE covers three main aspects (NCC, 1990), namely education about the environment, education for the environment, and education in the environment. Education about the environment is related to the understanding of the ecological principles that underpin the working and interaction of natural systems and human system. Education for the environment is concerned with the values, attitudes, and positive action for the environment. Education in the environment involves inquiry and investigation of nature. Accordingly, the teachers need to

possess necessary skills to address those aspects. They need to have a basic understanding of the environment, its associated problems and environmental interrelationships (Nehrbass and Seiser, 2001), and foresee consequences of practices and behaviours (Hungerford and Volk, 2003). It has also been shown that one of the most important sources of information about the environment for children is school lessons and projects (Strong, 1998). Therefore, EE educators should thus be concerned both about providing accurate content knowledge and using effective pedagogy (Christenson, 2004).

Environmental action activities have been found to develop a sense of ownership and empowerment so that people are prompted to become responsible and active citizens. Environmentally active and responsible educators are shown to affect the behaviour of the students (Hungerford and Volk, 1990). Healthy development is found to depend on healthy interactions with the natural environment (Wilson, 1992; Wilson, 1996). Outdoor experiences can enhance environmental sensitivity (Sia *et al.*, 1986) and are also shown to be able to develop empathic relationship to nature for both students and teachers (Palmberg *et al.*, 2000).

Educators are shown to influence the way students think, solve problems, and shape them to become responsible citizens, especially when both instructional and organizational factors focus on the goal of transfer (Basile, 2000). Many studies have also indicated that successful implementation of EE in schools depends substantially on the commitment, efforts and level of enthusiasm of teachers (Cutter and Smith, 2001; Pudín and Tagi, 2003). However, before the educators can equip learners with the essential skills, the educators must experience these skills for themselves and this can be accomplished through in-service teacher education (Nehrbass and Seiser, 2001). Thus, education institutions and professional associations should be encouraged to advocate EE as a necessary part of both the pre-service

and ongoing professional development of early childhood teachers (Davis, 1998).

In view of this, a study was undertaken to determine the preparedness of pre-school teachers with respect to their awareness and concern for the environment, involvement in advocacy activities, basic environmental knowledge, and level of sustainable practices. As indicated by various studies above, these elements are shown to be pre-requisites for a successful delivery of EE to students. The gap analysis will enable appropriate environmental education syllabus to be formulated and effective policies developed to equip childhood educators so that they can successfully impart EE to children and become their role models.

METHODOLOGY

A cross-sectional research design utilizing a survey method was conducted among pre-school teachers representing three main types of pre-school in Malaysia, namely Tabika Kemas (managed by the Ministry of Rural Development), Pra-Sekolah (run by the Ministry of Education), and private kindergartens. Permissions were sought from the Ministry of Education, various State Education Departments and the Department of Community Development (KEMAS) prior to the data collection. Four states were randomly chosen; these are Penang, Perak, Pahang and Melaka to represent Northern, Central, Eastern and Southern zone of West Malaysia, respectively. A district was then randomly picked to represent each of the state. Lists of all the kindergartens within the chosen districts were obtained from the respective State Education Department. A quota sampling method was used to select 25 respondents from each of the three types of kindergarten in the district. Each district was therefore represented by 75 respondents, and this gave a total of 300 respondents. Only one teacher per kindergarten, i.e. the one that was recommended by the principle, was given the questionnaire. The quota sampling was used as the technique has been known to produce representative

samples without a random selection of cases (De Vaus, 2002). The data were collected using the drop and collect method in 2005, and were then analyzed using SPSS version 11.0. The questionnaire consisted of five sections labelled as demographic variables, awareness, and concern for the environment, involvement in advocacy activities, basic environmental knowledge, and sustainable consumption practices.

Environmental awareness was assessed by requesting the respondents to state three environmental problems faced by the country. The level of environmental concern was gauged through the respondents' rating of the level of seriousness of environmental problems as compared to other social issues. It is important to note that this section of the instrument was adopted and adapted from Greenberg (2005). The involvement in advocacy activities was measured through membership in environmental clubs or organizations and participation in environmental activities. Four items were developed to assess the level of supportiveness and the participation of environmental activities with a response format of 1 for not supporting, 2 for supporting but not actively involved, and 3 for supporting and actively involved. This section of the instrument was also adopted and adapted from Greenberg (2005). The objective knowledge on environment was measured by a two part, 12 – items scale. In the first 2 items subscale, the respondents were asked to explain in brief of their understanding of the term environment and sustainability. Their answers regarding the meaning of environmental term were classified accordingly, as proposed by Loughland *et al.* (2003). In the second subscale, respondents were asked to indicate right or wrong answer to each of the ten statements. One point was given for each correct answer for an effective range of zero to ten marks. Similar measures of objective environmental knowledge were developed and used by Oskamp *et al.* (1991), Vining and Ebreo (1990) and Bartkus *et al.* (1999), where the scales were shown to have content validity and predictive validity with

regards to consumer environmental behaviours. Sustainable consumption practices (SCP) were based on the four principles of sustainable consumption expounded by Janikowski (2000) comprising of selection, reduction, maximization and segregation. It consisted of 14 questions with a response format of 4 for all the time, 3 for always true, 2 for sometimes true, and 1 for never true. Meanwhile, a pilot study was carried out to determine the suitability and reliability of the instrument developed and changes were then made accordingly. The Cronbach's alpha value of the reliability of sustainable consumption practices scale was 0.72 and thus is acceptable. Descriptive statistics were used to describe the findings of the study and relevant statistical tests were also conducted on some variables to explore the bivariate relationships and examine differences between groups.

FINDINGS AND DISCUSSION

Majority of the respondents were females (97.7%), consisting of Malays (59.0%), Chinese (31.7%), and Indians (9.3%). This

approximately corresponds to the distribution of ethnicity in the country's population. The age of the respondents ranged from 20 to 67 years, with a mean age of 35 years. As for the education level, 69.3% of the respondents had secondary level schooling, 28.4% were college graduates, and 2.3% were degree holders. However, among 100 Tabika Kemas teachers, 92% of them had only secondary school level education. Table 1 displays the demographic background of the respondents while Table 2 shows the distribution of age and educational background of respondents for the three types of pre-school. It was found that newspaper (91.7%) and television (86.3%) were the main sources of environmental information for the respondents (Table 3), as it was similarly observed in other studies among Malaysians (Nurizan, 2004; Sharifah Azizah *et al.*, 2005; Aini *et al.*, 2007).

There are various non-governmental environmental organizations and societies, such as Malaysian Nature Society, Environmental Protection Society of Malaysia, and World Wildlife Fund for Nature, Friends of the

TABLE 1
Distribution of the demographic variables

Variables	Percentage (%)
Gender	
Females	97.7
Males	2.3
Age (years)	
20-29	34.3
30-39	33.3
40-49	35.3
≥50	7.1
Race	
Malay	59.0
Chinese	31.7
Indian	9.3
Level of Educational	
Secondary School certificates	69.3
Diploma/College Certificate	28.4
Degree/Masters/PhD	2.3

N=300

TABLE 2
Distributions of the age and level of education against type of pre-school

Variables	Kemas pre-school	Pre-school	Private
Age (years)			
20-29	19.0	46.0	38.0
30-39	29.0	44.0	27.0
40-49	45.0	9.0	22.0
≥50	7.0	1.0	13.0
Level of Education			
Secondary School certificates	92.0	41.0	75.0
Diploma/College Certificate	8.0	53.0	24.0
Degree/Masters/PhD	-	6.0	1.0

N=300

TABLE 3
Respondents' sources of environmental information

Sources	%
Newspaper	91.7
Television	86.3
Brochures/Bulletin	48.5
Seminar	21.3
Internet	4.0
Magazines	0.7

N=300

Earth, and Love Nature Club, etc. in Malaysia. However, the data indicated that only a small fraction of the respondents (2.5%) were members to such organizations. Other studies found that the level of participation in the environment-related clubs/organizations among Malaysians was low (Norhasmah *et al.*, 2004; Md Nor *et al.*, 2004). As for the support and involvement in environmental conservation and preservation activities, majority of the respondents indicated that they supported the programmes but they have only modest commitment to action (Table 4).

When asked to name three environmental problems in Malaysia, the three most frequently mentioned issues by the respondents were water pollution (54.3%), air pollution (41.6%), and solid waste (13.9%). The study by Burningham and

Thrush (2001) similarly noted that environmental pollution was the main concern of the society with regards to environmental issues. However, the respondents rated the level of seriousness of the socio-economic problems (Table 5) higher as compared to that of environmental issues (Table 6). A One-Sample T- test showed that there is a significant difference in means on the rating of the socioeconomic against environmental seriousness by the respondents, $t(299)=34.329$, $p<.05$. In addition, they were of the opinion that the government is doing as much as necessary with regards to dealing with environmental problems faced by the nation (Table 7).

Environmental knowledge was gauged through the understanding of the fundamental concepts (i.e. the concept of sustainable development and understanding of the terms on

TABLE 4
Support and involvement of respondent with environmental conservation and preservation

Statement	1(%)	2(%)	3(%)
Environmental activities at community level	33.3	64.7	2.0
Open burning	34.7	53.3	10.0
Recycling activities	62.3	37.3	0.3
Do not litter	68.7	26.3	5.0

N=300, Scale: 1= Does not support; 2= Support but not actively involved; 3= Support and actively involved
Mean score= 6.18 from a range of 4 to 12

TABLE 5
Level of seriousness of socio-economic issues

Statement	1(%)	2(%)	3(%)
Traffic congestion	73.7	23.7	2.7
Vandalism	73.0	24.0	3.0
Increase in price of petrol	88.0	7.7	4.3
Increase in price of road toll	83.7	13.0	3.3

N=300, Scale: 1= Serious; 2= Quite serious; 3= Not serious
Mean score= 4.19 from a range of 4 to 12

TABLE 6
Level of seriousness of environmental problems

Statement	1(%)	2(%)	3(%)
Water pollution	29.3	58.7	12.0
Solid waste problem	45.3	50.0	4.7
Air pollution	19.7	55.0	25.6
Decreasing availability of open space	21.7	53.3	25.0

N=300
Scale: 1= Serious; 2= Quite serious; 3= Not serious
Mean score= 7.51 from a range of 4 to 12

environment), underlying causes (e.g. sources of water pollution), and the environmental impacts (e.g. loss of bio-diversity). The collected data indicated that the concept of sustainable development was unfamiliar to most of the respondents and the understanding of the term environment was also limited. Table 8 shows the conception of environment by the respondents. The answers could be divided into seven categories, namely God's creation,

a place, a place with living things, a place with living things and human, a place that provides something for human, human is part of it and is responsible in taking care of it, and the aggregate of all conditions that supports living things, that interacts and depends on each other. The six later categories were as proposed by Loughland *et al.* (2002). From a total of 300 respondents who had responded to the questions, only 6.0 percent of the teachers defined environment in

TABLE 7
Government's efforts in environmental preservation and conservation

Statement	1(%)	2(%)	3(%)
Government takes into account environment in development	15.3	52.7	32.0
Government organizes environmental campaigns	17.0	35.7	47.3
Government utilizes mass media for environmental education and awareness	17.3	33.7	49.0
Government punishes those who violate environmental regulations	11.3	31.3	57.3

N=300, Scale: 1= Too little; 2= enough; 3= Too much
Mean score= 7.25 from a range of 4 to 12

TABLE 8
Respondents' conception of the environment

Conception of environment	Percentage
God's creation	3.0
Place	28.0
Object	16.7
Place with living things	9.3
Human responsible for it	3.3
A place that support human living	5.7
Human and others depending on each other for living	6.0
Do not know	28.0

N=300

relation to conception, while 28.0 percent was not able to define it and the majority (62.6%) defined environment in object conception (a place, a place with living things/support them). Meanwhile, majority of the respondents (83.7%) indicated that they did not know the meaning of the term sustainability.

The average number of correct answers to ten close-ended questions on environment was 7 on a 10 points scale, indicating that on average the respondents obtained more than half the questions correct. The respondents seemed to be less informed regarding the underlying causes of environmental problems, such as causes of air pollution, acid rain and thinning of the ozone layer.

Table 9 shows the score distribution of the respondents on sustainable consumption practices which comprise of selection, reduction, maximization and segregation. The mean score of the respondents on SCP was 41.07, from a maximum score of 56 and this indicates that the adoption of sustainable practices was at modest level.

The Mann-Whitney Test was conducted to examine whether the sources of environmental information (newspapers, televisions, seminars, bulletins and brochures) affect environmental knowledge. It was found that the respondents, who either had televisions ($z = -2.954$, $p = 0.003$) or brochures ($z = -2.793$, $p = 0.005$) as their main sources of environmental information,

TABLE 9
Respondents' sustainable consumption practices

Level	Score range	%
Low	14- 27	0.7
Medium	28-41	47.0
High	42-56	52.0

N=300, Scale: 1= Never; 2= Very seldom; 3=Sometimes; 4= Very often
Mean score= 41.07 from a range of 14 to 56

had significantly higher level of knowledge than those who did not. Meanwhile, the Kruskal-Wallis test (ANOVA was not performed as the data violate the assumption homogeneity of variances) conducted indicated that the knowledge of environment differs significantly across the three education level categories (primary school, secondary school and college/university), $\chi^2 (2, N = 300) = 7.659, p = 0.022$.

The One-way ANOVA test showed that there were no significant differences between the three groups of pre-school teachers on the knowledge and practices, but this was otherwise across the ethnics. The Indian teachers were found to have significantly lower environmental knowledge as compared to the Malays and the Chinese teachers, $F (2, 297) = 4.561, p < .05$. This could probably be due to the higher percentage of the Indians respondents (78%) who attained only the secondary level of education. With respect to sustainable consumption practices, the Chinese teachers were found to have the highest total mean score (42.71), followed by the Indians (41.46) and the Malay teachers with the lowest total mean score of 40.14. The One-way ANOVA test indicated that the Chinese teachers had significantly higher level of practices against the Malays, $F (2, 297) = 6.767, p < .05$.

CONCLUSIONS AND IMPLICATIONS

In this study, the data indicated that the respondents were aware of various basic environmental problems faced by the country, but less of the advanced environmental issues. Instead, they were found to be more concerned with other social problems as compared to

environmental issues. Environmental knowledge was commendable, where most of learning on environment was via mass media, as appeared more effective through television and brochures. However, the teachers' understanding was rather shallow on the concept of environment and they had a vague notion of sustainable development. The understanding of these two fundamental concepts is vital as it lays the foundation for environmental involvement and actions. There was a minimal level of involvement in environmental clubs or organizations, while the adoption of sustainable practices was modest. The findings above were similarly noted in a study conducted among primary and secondary school teachers in the country (Aini *et al.*, 2003). Based on the above findings, it can be concluded that the pre-school teachers in the country have more or less the same level of environmental awareness, knowledge and sustainable practices, regardless of the type of pre-school where they teach and their age. This uniformity would facilitate the formulation and implementation of a standardized in-service training of the teachers with regards to environmental education. However, special attention should be given to narrow the gap between the ethnics on sustainable practices and environmental knowledge, as well as on knowledge between teachers of different educational attainment.

In conclusion, the above findings indicate that the pre-school teachers are to some extent prepared with basic essential elements for EE. Nonetheless, based on the present environmental assessment data (indicating that 60% of the world's ecosystem services are being degraded

or used unsustainably, GEO-4), the present level of preparedness of childhood educators needs to be enhanced. More importantly, they ought to be equipped with the appropriate knowledge and behaviour, as studies have shown that teachers' attitude, knowledge, and behaviour towards the environment do affect and influence the students' attitude towards the environment (Summers, 2000; Bradley *et al.*, 1999). Furthermore, early years are vital for development of attitudes, learning, and subsequent development in environmental behaviour. The young are not only the future guardians of the earth, but also seem to possess peer power that influences their families' present expenditure and consumption pattern. Hence, the pre-school teachers need to enhance their preparedness for EE, specifically in the principle environmental knowledge and understanding of environmental interrelationships that aid education about the environment, enhance preparedness in education for the environment by engaging in environmental advocacy activities and sustainable behaviour as it has been found that successful implementation of EE in schools is greatly dependent upon the commitment, efforts and enthusiasm of teachers (Cutter and Smith, 2001).

The data obtained in this study could be used as base data for future benchmarking as pre-school education has recently been formalized into the national education system and that EE curriculum has just been introduced into the syllabus. There are various ways of enhancing preparedness of the pre-school teachers in the country for EE: in-service training programmes for the teachers should give emphasis to environmental aspects, encourage involvement of teachers in environmental related clubs/activities, establish linkage between the school and corporations or organizations that have environmental interest, and organize or participate in talks, seminars, and visits. It is also imperative for various stakeholders, particularly the Ministry of Education, to develop suitable environmental education syllabus for pre-school teachers training and in-service training programmes to enhance their preparedness for EE. National standardization of these

programmes is also necessary as to ensure that the quality and standard of EE delivered by all types of pre-school in the country are uniform.

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Household Expenditure on Food Away from Home by Type of Meal in Malaysia

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ABSTRACT

This paper analyses the household food-away-from-home (FAFH) expenditure pattern in Malaysia. For this purpose, the Tobit model was used to quantify the responsiveness of households' expenditure on FAFH to changes in their income and the household characteristics. The results show that households' FAFH expenditure has increased due to rise in income and changing lifestyle. Meanwhile, the household income has statistically significant influence on the FAFH expenditure for all types of meals, except for breakfast, although the FAFH expenditure for breakfast is positive. The positive effect of the total household income shows Malaysian households spent more by eating out as they have to spend more time at work and less time to prepare food at home. Breakfasts and lunches away from home have positive and inelastic income. The results indicate that household members have less choice but to consume breakfast and lunch away from home as their workplaces are usually far away from their homes and thus consume these meals at home are not cost-effective. They have greater flexibility in making decisions whether to consume at home or away from home for dinner and other meal. The estimated conditional and unconditional income elasticity for the households' FAFH expenditure for all types of meals shows that the FAFH expenditures by Malaysian households are income inelastic. This implies that the growth in the FAFH sector will largely be driven by household demographics, ethnic characteristics and region in Malaysia. The government should take appropriate measures to ensure that the meals are of high nutritious values, safe, and reasonably priced.

Keywords: Conditional and unconditional elasticity, food away from home, Malaysia, type of meal

INTRODUCTION

Eating away from home for Malaysian households has increased over the years, and this has drawn a significant interest by policy makers for many reasons. This country has achieved high income growth and experienced rapid structural transformation and urbanization in the recent years. The changes in socio-

economic and demographic structure have also occurred – the average household size has been falling (from 5.2 in 1980 to 4.3 persons in 2005), while the percentage of the population in the 65 years and above age category is increasing (Department of Statistics Malaysia, 2006). Women working outside home also showed an increasing trend from 44.5% to 46.7% between 2000 and 2005 (Ministry of Finance, 2004).

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Malaysia is a multi-ethnic country consisting of three dominant ethnic groups, namely the Malays (65%), Chinese (26%), and Indians (8%). Each ethnic group has their own food habits and the choice of the consumers may vary widely among these heterogeneous ethnic groups. In Malaysia, the expenditure on food at home (FAH) was found to have declined from a share of 36.2% of the total household food budget in 1973 to 20.1% in 2004, while spending on food away from home (FAFH) rose from 8.9% in 1973 to 10.5% in 2004. These findings indicate that Malaysians have changed their preference for food away from home at the expense of having meals at home. The market worth of consumer food service transactions was RM16,312 million (US\$4,315 million in the current value in 2003) which grew from 22% to 39% from 1999 to 2003 (Lee and Tan, 2007).

The increasing trend of home delivery and take-away food sector clearly demonstrates that the Malaysian households are spending less time in preparing FAH, a reflection of busy work schedules outside the home. There is a rapid growth of food service facilities, such as fast food restaurants and street food stalls, available throughout the country. At the same time, a variety of food items and the service facilities are now available in the FAFH sector. This will likely to have continuous impacts on the distribution, marketing, food service system, and the nutritional intake. With growing urbanization, it is expected that there will be significant changes in future food consumption in terms of dietary habits and food preferences in Malaysia. The important concerns for FAFH are related to the nutritional value, food safety and the ambient environment of the eateries. The literature reviewed reveals that very little research has been conducted to examine the FAFH consumption pattern in this region.

Most studies on the FAFH expenditure have identified income, race, household size, and residence of the households (Hanna and Carter, 1986; Lee and Brown, 1986; McCracken and Brandt, 1987; Soberon-Ferrer and Dardis, 1991; Yen, 1993), seasonal effects, age, and

status of parents (Hiemstra and Kim, 1995; Yen, 1993; Nayga and Capps, 1992) as important determinants of the FAFH expenditure. Meanwhile, Ries, Kline and Weaver (1987) found that the nutrient density of FAFH was lower than FAH. McCracken and Brandt (1990) asserted that both the socio-economic and demographic variables have differential impacts on the FAFH expenditure facilities (different types of eating places) and have important implications in analyzing household food demand. Reynolds and Goddard (1993) examined the determinants of FAFH based on the type of facilities and the types of meal in Canada. They found that the household choices on FAFH differ by the type of meal.

In Malaysia, studies on FAFH have mostly been done at the total expenditure levels. Three studies (Ishida *et al.*, 2003; Lee and Tan, 2007; Alias *et al.*, 2006) looked at the FAFH in Malaysia using the Household Expenditure Survey data. Among other, Ishida *et al.* (2003) estimated the Engel's demand elasticity while Lee and Tan (2007) and Alias *et al.* (2006) found that gender (male), age of household head, household size and education are the significant variables. Meanwhile, individuals from urban areas appeared to have high FAFH demand as compared to those from the rural areas.

This paper investigates the household expenditure on the FAFH based on the type of meals (breakfast, lunch, dinner, and other meal) for the households in the urban and rural areas of Malaysia. The objectives of the study were to: (a) determine the consumption trends and spending patterns of Malaysian households on food away from home, and (b) estimate the responsiveness of FAFH meals to changes in income and selected household demographic characteristics. This paper is organized as follows; Section 2 describes the Model used in the study; the data and their sources are described in Section 3; the results are discussed in Section 4; and the conclusions are presented in the final section.

MODEL

The household production theory (Becker, 1965; Lancaster, 1971) has been used in many studies as the underlying theoretical basis for analyzing the demand for food away from home (Stewart *et al.*, 2004). The theory posits that households are maximizing utility in the consumption of home-produced goods subject to a household production function, time, and income constraints. The production theory mainly accounts for time constraints in the household's decision making process, and thus, the value of the homemaker's time is an important determinant of FAFH expenditure (Prochaska and Schrimper, 1973). As the opportunity cost of time rises, households can be expected to purchase food items that require less time to process at home. In this case, food bought outside home and not cooked at home would be considered as FAFH consumption.

At the same time, the respondents may report zero FAFH expenditure. The estimation of coefficient will be inconsistent when only observed positive purchase data are used to estimate consumption behaviour by the OLS regression. The censored Tobit model is appropriate because it allows the presence of zero observations attributable to corner solutions. Zero shares are censored by an unobservable latent variable. The Tobit model is used to handle the censored sample, i.e. a sample in which information on the dependent variable is available only for some observations. This model is often used to investigate the determinants of household expenditure (Soberon-Ferrer and Dardis, 1991).

In order to purchase an item, it is assumed that households make two decisions. These decisions are, first, whether to spend - a participation effect and, second, how much to spend - a quantity effect. The researchers used the standard Tobit model to specify the estimating equation for the demand model for the FAFH consumption expenditure. In their work, Deaton and Irish (1984) assumed a linear equation, while the Tobit formulas for both latent demand and observed demand are:

$$Y^* = \beta' X + \varepsilon, \text{ (latent demand)} \quad [1]$$

$$Y^{**} = \max(Y^*, 0) \text{ (observed demand)} \quad [2]$$

The maximum likelihood method was used to estimate the β coefficients. This method assures large sample consistency, asymptotic normality of the estimated coefficients and conventional tests of significance. The log likelihood function for the Tobit model is expressed as:

$$\text{Log } L = \sum_0 \log \Phi (\beta' x / \sigma) + \sum_+ \{ \log \varphi [(y - \beta' x) / \sigma] - \log \sigma \} \quad [3]$$

Where Φ and φ are the cumulative probability distribution function, the density function of the standard normal variable and σ is the standard deviation of μ (Greene, 2003). The subscripts 0 and + mean that summation is performed over the sub-sample in which dependent variable is zero and positive.

The marginal effects of the Tobit model, with censoring at zero and normally distributed disturbances, can be written as follows (Greene, 2003:766):

$$\frac{\partial E[y_i | x_i]}{\partial x_i} = \beta \Phi \left(\frac{\beta' x_i}{\sigma} \right) \quad [4]$$

Where β is the estimated coefficient of the Tobit model corresponding to x_i , $\Phi \left(\frac{\beta' x_i}{\sigma} \right)$ is the cumulative distribution function and σ is the standard deviation of the distribution. A useful decomposition of $\partial E(y_i / x_i) / \partial x_i$ was suggested by McDonald and Moffitt (1980):

$$\frac{\partial E[y_i | x_i]}{\partial x_i} = \beta \times [\Phi_i(1 - \lambda_i(\alpha_i + \lambda_i)) + \varphi_i(\alpha_i + \lambda_i)] \quad [5]$$

where

$$\Phi_i = \Phi(\beta' x_i / \sigma) = \Phi(\alpha_i) \text{ and } \lambda_i = \varphi_i / \Phi_i$$

Taking the two parts separately, this leads to the decomposition of the slope vector into:

$$\frac{\partial E[y_i | x_i]}{\partial x_i} = \text{Prob}((y_i > 0)) \frac{\partial E[y_i | x_i, y_i > 0]}{\partial x_i} + E[y_i | x_i, y_i > 0] \frac{\partial \text{Prob}[y_i > 0]}{\partial x_i} \quad [6]$$

Thus, a change in x_i has two effects, namely, its effects on the conditional mean of y_i^* in the positive part of the distribution, and its effects on the probability that the observation will fall in that part of the distribution.

From the estimated marginal effect, the conditional elasticity of y_i with respect to any x_i such as income, can be computed as follows:

$$\text{Conditional Elasticity } \epsilon^c = \frac{\partial E[y_i|x_i]}{\partial x_i} \frac{E(x_i)}{E[y_i|x_i]} \quad [7]$$

The unconditional elasticity of y_i , with respect to any x_i can be computed as:

$$\text{Unconditional Elasticity } \epsilon^u = \frac{\partial E(y_i)}{\partial x_i} \frac{E(x_i)}{E y_i} \quad [8]$$

DATA SOURCE

A combination of the stratified and cluster sampling design was adopted. A detailed list of household census and locations (Enumeration Blocks and living quarters) throughout Malaysia was obtained from the Department of Statistics Malaysia. At the same time, the stratification by states was done at the first stage and nine states were randomly selected from the list. Each selected state was further divided into urban and rural clusters which were randomly selected. Within each selected cluster, Living

Quarters (households) were randomly selected. The selected sample included 31 Enumeration Blocks in 9 states, with a total sample size of 283 Living Quarters consisting of 176 households from the urban areas and 107 households from the rural (Table 1).

The survey used structured questionnaire at the household level. The questionnaire was divided into sections for its convenience to record household socio-demographic characteristics and to record food expenditure away from home. The expenditure of all the members of households on FAFH was recorded by types of meals. The household members in Malaysia consume three main meals a day. In addition, light foods such as snacks, tea, biscuits, etc. in-between meals are also being consumed. The expenditures on meals away from home made by household members were recorded at the end of the each day during the survey week. In many of the sampled households, record keeping work was performed by housewives, but in some, this task was done by the school or college-going members of the households. The sampled households kept records on their food expenditures for 7 consecutive days, and the duration of survey was spread over one month to overcome logistical problems of having to cover all the respondents in the same week. The survey period lasted from May 15 to June 15, 2008.

TABLE 1
The sampled households by urban and rural areas for FAFH survey

State	Urban		Rural		All	
	No.	Percent	No.	Percent	All	Percent
WP	53	30.1	0	0.0	53	18.7
Selangor	40	22.7	32	29.9	72	25.4
Kedah	16	9.1	16	15.0	32	11.3
P. Pinang	24	13.6	0	0.0	24	8.5
Sabah	16	9.1	0	0.0	16	5.7
Sarawak	16	9.1	0	0.0	16	5.7
Terengganu	0	0.0	22	20.6	22	7.8
Johor	3	1.7	29	27.1	32	11.3
N. Sembilan	8	4.5	8	7.5	16	5.7
All	176	100	107	100	283	100

The sample statistics of the FAFH expenditure according to the type of meal are presented in Table 2. Of the total sample, 241 households (82%) reported expenditure on breakfast, 224 households (79%) on lunch, 197 households (70%) on dinner, and 118 households (42%) on other meals away from home during the one-week period (Table 2).

Average weekly FAFH expenditure by households on breakfast, lunch, dinner, and other light meal were RM34, RM 47, RM43 and RM11, respectively (Table 2). Meanwhile, the weekly average FAFH expenditures for consuming households were RM40, RM60, RM61, and RM26 for breakfast, lunch, dinner and other meal, respectively. The expenditure also varied between the urban and rural areas, while the overall expenditure for all types of meals in urban areas was higher than that of the rural areas (Table 3).

This study used household expenditure as proxy for the demand of FAFH by the households. The household expenditures on breakfast, lunch, dinner, and other meals away

from home during a one-week period were used as the dependent variables. The important explanatory variables are household income, which is an average monthly income of earning members of the households. Other explanatory variables used include education, household size, ethnic, and region (urban and rural).

The household income was hypothesized to have a positive effect on the FAFH expenditure. In other words, as income increases, households may allocate more of their income to FAFH expenditure. Several socio-demographic variables were also included in the estimated equations to capture the taste and preferences of the household FAFH consumption. Meanwhile, household size (measured as the number of persons residing in the household during the survey week) was expected to have a negative effect on FAFH expenditure. The effects of age of household head (in years), education attainment of household head (in years) and the number of children below 12 years were ambiguous. The studies by Capps Jr. and Park (1997) as well as McCracken and Brandt

TABLE 2
Sample statistics of FAFH by meal type

Meal type	Full sample		Consuming households		
	Mean	Std. dev.	Mean	Std. dev.	N ^a
Breakfast	34.55	38.13	40.38	38.26	241
Lunch	47.66	47.45	59.95	45.76	224
Dinner	42.86	68.20	61.45	74.28	197
Others	10.83	53.99	25.80	81.09	118

^aSize of consuming households

TABLE 3
Sample statistics of FAFH by meal type by region

Meal type	Urban			Rural		
	Mean	Std. dev.	N	Mean	Std. dev.	N
Breakfast	44.59	43.47	149	33.64	26.85	93
Lunch	67.21	47.28	144	47.05	40.06	81
Dinner	71.14	84.71	131	42.50	42.25	67
Others	30.23	99.32	78	17.39	17.32	41

(1987) used the variables for ethnicity to capture cultural and ethnic differences that influence purchase decisions. They found that there were differences between younger and older people in tastes, eating habits, and lifestyles. Several dummy variables were also used in an attempt to capture the regional (urban or rural) and racial (Malay, Chinese, Indian, or East Malaysian Bumiputra) differences in the FAFH expenditure by households in this study. The sample statistics of all the explanatory variables are presented in Table 4 below.

RESULTS

The standard Tobit model for each meal and for the overall FAFH expenditure was estimated by the maximum likelihood technique. Five equations were independently estimated in one for each type of meal, namely breakfast,

lunch, dinner and others, and another for the overall FAFH expenditure. The dependent variable for each of these equations consists of per week expenditure (RM) on FAFH by household members. Table 5 presents the results of the estimated equations. The total household income is statistically significant and has positive effect for the total FAFH expenditure and the FAFH expenditure on all types of meals except breakfast. The range of increase in the FAFH expenditure is between RM0.02 to RM0.04 for every RM increase in the income per week. The positive effect of total household income shows that as income rises, households spend more by eating out as expected probably because they have to spend more time at work and less time to prepare food at home.

The results show that a few socio-demographic variables were found to be statistically significant in the overall FAFH

TABLE 4
Sample statistics of explanatory variables

Variables	Mean	Std. dev.	Min	Max
Continuous				
Total FAFH Expenditure (RM/per week)	136	142	0	1174
FAFH Expenditure on Breakfast (RM)	34.5	38.1	0	342
FAFH Expenditure on Lunch (RM)	47.7	47.4	0	267
FAFH Expenditure on Dinner (RM)	42.9	67.9	0	760
FAFH Expenditure on Others (RM)	10.8	53.9	0	876
Total Food At Home (FAH) Expenditure (RM)	157	113	0	1216
Household Income (RM)	718	461	125	1375
Household size (No.)	5.4	2.2	1	13
Household head Age (year)	47	10	21	82
Education of household head (year)	10.8	4.0	0	16
No. of Children (below 12 years)	1.3	1.4	0	7
Dummy (yes=1, no=0)				
Urban households	0.62	0.48	0	1
Malay household	0.59	0.49	0	1
Chinese household	0.24	0.43	0	1
Indian household	0.11	0.31	0	1

expenditure, breakfast and lunch equations and more of these variables are statistically significant in the FAFH expenditure equations for dinner and other meals. The household members' work places tend to be away from home. As a result, they prefer eating breakfast and lunch at or close to their working places rather than at home in order to save time and costs. However, for dinner and other meals, they may not be constrained by having to return to their work place after meal and thus, they have more flexibility in making decisions whether to consume these meals at home or away from home.

The effects of the household income (per week) on FAFH expenditure on dinner and other meals are statistically significant. For every RM increase in household income, the FAFH expenditure on dinner and other meal increases by RM0.03 and RM0.01 per week. The FAH expenditure has significant effect on the total FAFH expenditure and FAFH expenditure on all types of meals except lunch. The effects of the FAH expenditure on the FAFH expenditure are positive in all the equations. For every RM increase in the FAH expenditure, the FAFH expenditure increase between RM0.03 and RM0.2 per week. Similarly, the increase in the

TABLE 5
Maximum likelihood estimates of Tobit model: Food away from home expenditures by meal type

Variables	Total FAFH expenditure	Breakfast	Lunch	Dinner	Other meal
Constant	20.847 (77.569)	5.916 (23.397)	12.1263 (25.6639)	-27.7680 (32.8355)	45.968 (28.962)
Household Income (RM/month)	0.0482** (0.0194)	0.00537 (0.00555)	0.02572*** (0.00801)	0.02555** (0.01017)	0.01404** (0.0058)
Age of household head (Year)	0.0016 (0.0501)	0.01099 (0.02910)	-0.00995 (0.03917)	0.044767 (0.03790)	-0.0215*** (0.0075)
Household size (number of household member)	-0.1173 (5.5847)	0.34539 (1.55789)	0.02214 (2.2714)	-0.6692 (2.1198)	-2.0764** (1.8753)
Number of children (below 12 years)	-7.7826 (7.4815)	-2.4975 (2.2814)	-3.867 (3.297)	-3.95852 (3.7728)	7.2974*** (2.44204)
Education of household head (level of education)	-2.1631 (2.6064)	-0.5014 (0.7586)	-0.2907 (0.96142)	-0.76084 (1.3553)	-0.24250 (0.44981)
Expenditure at home (RM/per month)	0.2192*** (0.05577)	0.0364** (0.0174)	0.0525 (0.03274)	0.07585** (0.0301)	0.086877*** (0.023134)
Ethnic (dummy)					
Malay	45.179 (52.8835)	18.677 (16.764)	-0.16235 (18.6496)	28.9959 (20.9846)	19.540 (27.253)
Chinese	86.504 (53.307)	27.858* (16.606)	15.9141 (19.0844)	38.7279* (21.0112)	16.3842 (28.6184)
Indian	65.099 (50.713)	22.2711 (16.2758)	7.900 (19.5295)	46.0998** (20.7656)	5.5932 (26.3567)
Region	30.01 (18.67)	2.8593 (5.007)	8.880 (7.8126)	14.9126* (8.3948)	15.6328** (7.1757)

Standard errors in parentheses.

* (**) (***) Significant at the 0.10, 0.05 and 0.01 level.

FAH expenditure by households will increase FAFH expenditure simultaneously, and this is probably because of the households' preference changes for better quality and more nutritious food that cost more.

Age of the household head was found to have significant and negative effect only on the FAFH expenditure for other meals. In other words, as the age of household head increases by one year, the households spent less eating out for other meals, but the reduction is very small, i.e. at RM0.02 per week. The household size also has a significant and negative effect only on the FAFH expenditure for other meals. Once again, as household size increases, the tendency for households to spend more on main meals such as breakfast, lunch, and dinner but they spend about RM2 less eating out for other meal. Greater number of children below 12 years in the households has significant and positive effect on FAFH expenditure for other meal. For an additional child, households spent more than RM7 per week on other meals, and this is probably due to the fact that school going children spend more on food at school canteens. This increases their tendency to eat out between meals at fast food restaurants.

The regional dummy variable has significant and positive effects on the FAFH expenditure on dinner and other meals. These results indicate that the urban households spent on average RM15 per week on dinner and RM15 on other meals away from home. For the racial dummies, Chinese households spent on average RM28 per week on breakfast and RM38 per week on dinner away from home more than the Bumiputra households in East Malaysia. Meanwhile, the Indian households spent significantly more (RM46 per week on dinner away from home) as compared to East Malaysian Bumiputra households.

The elasticity of the FAFH expenditure was computed based on the Tobit equations estimates. Table 6 presents the conditional and unconditional income elasticities. The estimates for all types of meals are all less than one, except for the unconditional elasticity of

other meals (2.042) which indicates that the FAFH expenditure by Malaysian households are income inelastic. The implication is that a one percent increase in income will increase the FAFH expenditure by less than one percent. Meanwhile, the conditional income elasticity for the overall FAFH expenditure, breakfast, lunch, dinner, and other meals are 0.22, 0.09, 0.31, 0.29 and 0.51, respectively. As for the unconditional income elasticity, their values for all types of meals are higher than the corresponding conditional values. The unconditional income elasticity ranged from 0.11 for breakfast to 2.04 for other meals. These values are consistent with those estimated in other studies. For instance, Byrne *et al.* (1996, p. 615) estimated the income elasticity values between 0.11 and 0.36, while Ma *et al.* (2006) estimated the elasticity of meat for FAFH in China to be 0.35.

CONCLUSIONS

In this study, the household FAFH expenditure in Malaysia was analyzed using the econometric model that accommodates zero observations in the sample. The results of the study show that there are potentials for the FAFH industry to expand and prosper in Malaysia. As the Malaysian economy continues to grow in the long run and in turns causing household income to rise, the household FAFH expenditure will also be increased as indicated by the positive, albeit inelastic expenditure with respect to income. In other words, income increases imply that household members need to spend more time at work and less time to prepare food at home.

Urbanization will also raise household expenditure on FAFH. In particular, the urban households were found to spend more on FAFH than the rural households, particularly on dinners and other meals. There are differences in the FAFH expenditure among the households of various ethnicities. Meanwhile, the Chinese and Indian households' expenditures on FAFH are relatively higher as compared to the Malay and East Malaysian Bumiputra households. Although FAFH providers need

TABLE 6
Conditional and unconditional income elasticity of demand for FAFH

Meal type	Conditional elasticity ^a	Unconditional elasticity	Total elasticity
Breakfast	0.088	0.111	0.199
Lunch	0.309	0.393	0.702
Dinner	0.294	0.440	0.734
Others	0.511	2.042	2.552
All meals	0.217	0.251	0.468

^aThe conditional elasticity or quantity elasticity is the elasticity of expected consumption of consuming individual with respect to the independent variable (FAFH expenditure).

to take cognizance of the ethnic differences and cater their services accordingly, it will be more sensible and appropriate to provide FAFH that is acceptable to all the ethnic and religious groups. At the same time, greater number of children in the households has caused them to spend more on other meals. This is probably due to the fact that school going children spend on food at school canteens and they have greater tendency for eating out between meals at fast food restaurants.

Households make choices more frequently when deciding on the expenditures for dinners and other meals as compared to breakfast and lunch. Increasing the variety of food and improving the menu may help to spur the growth of the industry. The household members have not much choice but to spend on breakfasts and lunches near to or at their work places in order to save on traveling time and cost of eating at home. As such, steps need to be taken to ensure that these meals are of high nutritional values, safe to consume and reasonably priced. As for dinners and other meals, increase the variety of food and improving the menu may help to spur the growth of the industry.

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Case Study on the Singing Languages and Music Learning of Six Years Old Foochow Children in Sarikei

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ABSTRACT

The choice of language used in singing has an effect on children's response towards music. As multiple languages are used among the Foochow community in Sarikei, which is located in Sarawak, East Malaysia, they provide the researcher an opportunity to observe the influence of different languages, namely Mandarin, Malay, English, and Foochow dialect in the song learning process of 16 six year-old children. It was found that children are more musical singing in the Mandarin and Foochow dialect as compared to singing in the languages of Malay and English. The process of urbanization has also caused the vanishing of traditional arts as well as the decline in the usage of Foochow dialects, in which the change of community and environment have affected the enculturation process of language among Foochow children.

Keywords: Singing languages, Foochow community, Sarawak, enculturation, children's musical response

INTRODUCTION

Language and music are both the products of human intelligence, and they are also the representatives of a culture within certain community. The language used in a specific culture, which has distinctive syllabic structure, rhythmic character and intonation, has influence on its music. Therefore, singing in a language other than one's mother tongue, which characteristic is different from the mother tongue, could cause difficulty to the singer in the aspect of speaking accent and singing diction, especially a six year-old child. If so, does language matter in music learning? How does singing in different languages influence the music learning among the children? Do children learn more effectively when they sing in their mother tongue? This paper examines the influence of different languages in singing, which are Malay, English, Mandarin and Foochow dialect, and its evidence on musical response of the six year-

old Foochow children in Sarikei, in the state of Sarawak, East Malaysia. The relationship between learning efficiency and community's perception of the language, especially the four languages used in music teaching carried out by the researcher, was examined.

LITERATURE REVIEW

Bright (1963) claimed that there are correlations between language and music, as all the cultures used the same physical train in deriving both linguistic and musical systems, such as the close association between rhythmic patterns of Hungarian folk melody and the practice of stressing the first syllables in the Hungarian language (Brocklehurst, 1971). In the concept of 'Musilanguage' by Brown (2001), the point of convergence between music and language is combinatorial syntax and intonation phrasing. It indicated that phrase, as a basic unit of structure that functions for both the music and language,

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later generates to higher-order structures through combinatorial rules. Thus, both language and music consist of sequences that are structured according to syntactic regularities (Jentschke *et al.*, 2008).

Koelsch *et al.* (2005) conducted a study in Germany using Event Related Potentials (ERPs) to investigate the simultaneous processing of language and music using visually presented sentences and auditory presented chord sequences. Music-syntactically regular and irregular chord functions were presented synchronously with syntactically correct or incorrect words. Music-syntactically irregular chords elicited an early right anterior negativity (ERAN). Syntactically incorrect words elicited a left anterior negativity (LAN). The results demonstrated that processing of musical syntax (as reflected in the ERAN) interacts with the processing of linguistic syntax (as reflected in the LAN), and that this interaction is not due to a general effect of deviance-related negativities that precede an LAN, but indicates a strong overlap of neural resources involved in the processing of syntax in language and music. Jentschke *et al.* (2008) also conducted a study in Germany to look at the ERAN (early right anterior negativity) and N5 (an anterior negativity with a latency of around 550 ms which usually co-occurs with the ERAN), using two specific event-related brain potentials (ERPs) components that could reflect the music-syntactic and language syntax processing in children. The neural resources posited there were overlapped of these processes, where it implicated a strong interrelation between the language and music processing system.

In the Philippines, the Lubuagan Kalinga First Language Experiment was carried for ten years in the classrooms to test the efficiency of mother tongue-based multilingual education scheme - MLE in teaching the local students of Lubuagan, Kalinga province (Duran Nolasco, 2009). MLE teaches students to read and write in their mother tongue, as well as using mother tongue in teaching subjects like Mathematics, Science, Health and Social Studies, instead of using national languages, which are Filipino

and English, as the mediums of instruction (Duran Nolasco, 2009; Dumatog and Dekker, 2004). The test showed that the classes which were implemented with MLE scored nearly eighty percent mastery of the curriculum as compared to the classes that were implemented with conventional bilingual educational scheme and used Filipino and English as the mediums of instruction. It provides a crucial evidence that the mother tongue instruction strengthened the learning of English and Filipino and did not hinder the learning of contents (Duran Nolasco, 2009; Dumatog and Dekker, 2004). Besides, the MLE programme also reported positive effects on educators, parents and students (Dumatog and Dekker, 2004; Dekker, 2002). Teachers were found to be resourceful and creative in teaching, where it was shown to successfully sustain the learning interest of the students. The concern among illiterate parents' on their children's education was enhanced as they became daily consultants for children's inquiry in learning mother tongue. In fact, they became responsive in giving co-operations to teachers as they were called to evaluate their children's development. Finally, students' attendance was found to have greatly improved as they gained the perceptions that learning in class has become pleasant, dynamic and interactive.

The mentioned research in Philippines posited the two-way interactions between Background and Educational Treatment factors. The results generated the medium of instructions of school programmes for minority language children is of particular constellations of social factors, rather than the choice of language as an independent variable. According to UNESCO (1953), the mismatched between the language used at home and school led to academic retardation, and this is supported by Downing (1974) who stated that the best medium for teaching a child is his mother tongue.

Language Context of the Foochow Community

The Foochow community comprised of the immigrants from Fujian (福建), China, who came to Southeast Asia during 19th century due

to the demand of labour force in the agricultural sector in East Malaysia. The first reclamation area of the Foochow community was in Sungai Merah, Sarawak, where it gradually extended in later years under the leadership of Huang Naishang (1849-1924) – the first Kangchu of New Foochow and James M. Hoover (American missionary – the Father of Development of the Foochow community) (Huang, 2005; Fang, 1996). Sarikei has been one of their obtained wasteland for cultivation since 1912s, which is located at the downstream of the Rejang River (Huang, 2005; Fang, 1996). At present, the natives of Chinese are approximately 26,400 of the total 67,300, which is the biggest population in Sarikei (Monthly Statistical Bulletin Sarawak, 2008). Among the Chinese community, the Foochow MinQing (閩清) comprises 70% of the Chinese population. The rest of the natives in Sarikei are Iban (18,600), Melanau (11,000), Melayu (9,000), Bidayuh (200), other bumiputera (100) and non-Malaysian citizen (1,900).

The MinQing Foochow in Sarikei speaks Foochow dialect and Mandarin as their cultural languages, whereby the earlier is the informal language and the latter the formal language of the community. In the Foochow community, Mandarin is considered as the main language for educational purpose, especially in the kindergarten and primary school, where this situation has a relation with the development of its educational system in history. The educational system of the Foochow community has an inseparable relationship with Christianity. During the reclamation period (since 1903), churches were built in every wasteland region. According to Huang (2005), Rev. Hoover used his political advantage in helping the community to build schools which were attached to the church. Every school was managed by a preacher who was also the teacher assisting in the daily teaching (Huang, 2005). In 1916, big numbers of churches and schools among the Chinese community caused difficulties for Rev. Hoover in managing the quality and effectiveness of the educational programmes in different regions (Huang, 2005). It resulted

in leaving the ‘Management Board’ which was formed by a group of local Chinese (mostly MinQing Christians) in each region to function as the Ministry of Education, which was directly responsible to the government (Huang, 2005). This educational system and strategy were set as a role model for the Foochow community in managing the Chinese secondary, primary and preschool education programme until these days (Chen *et al.*, 1951; Huang, 2005). According to Huang Renqiong (1951), the dual language system of both English and Mandarin was emphasised in the educational system during the reclamation period. On the other hand, Malay language was introduced as a compulsory subject in educational programmes of the Foochow community only after 1970s, as the whole Malaysia educational system was unified (Zhuang, 2004).

*The Language Environment in Sarikei:
Foochow Dialect, Mandarin, English and
Malay*

The Foochow dialect is the most significant feature of the community culture in comparison to others. In the past, the Foochow dialect was the most commonly used language among the community (the labours) as compared to Mandarin due to the fact that Mandarin was only spoken by those who were educated. During the reclamation period, the Foochow dialect was used as the teaching language, for preaching in Sunday services and daily communication among the Foochow natives. This language is still used up to the present day in daily communication, interaction between individuals, as way of expression of thoughts and organization of human activities, such as in dealing with businesses, formal works, and educating purposes.

Mandarin is considered as the formal speaking language that is widely used among the Foochow community in organizing community events, public talks, Sunday service, communicating with other Chinese communities such as Cantonese, Hokkien, MinNan, and Hakka. Mandarin is particularly important in

the primary and preschool education among the Foochow community as it is the medium of instruction for the teaching and also the language of communication between the teachers and students. Moreover, Mandarin is used as the medium of instruction as teaching in language classes such as Malay and English. In the recent years, young parents begin to substitute the Foochow dialect with Mandarin in their daily communication with their children due to the process of urbanization and the learning trend of the Chinese primary schools in the community. As Mandarin is used as the teaching language in classrooms and the contents of text books consist mostly of the Chinese text, it is thought that speaking Mandarin to children in their early years could cultivate their language competence and help in achieving advance academic performance in the future.

During the reclamation period, English was taught since Year Two in the primary school. English education in school prepared the local people in handling formal working duties with the English government. At present, English is commonly used among government servants of the Foochow community who are living in the urban areas when dealing with their formal work, but not in their daily communication. It is important to note that learning English is not stressed among most of the Foochow natives in Sarikei. However, English speakers are treated as if they have a higher social position for it equivalence to the status of the better educated.

Meanwhile, the formal Malay speaking is not widely used among the community. For most of the Foochow natives, Malay language is not more than a compulsory subject in the school curriculum. While informally, Malay speaking is quite commonly used for communication among people of the different races, such as Chinese, Iban, Malay and Indian, especially regarding business matters. However, the language spoken is organized in simple sentences and often a mixture with other languages like Foochow, Hokkien, Iban, and Mandarin.

In summary, the Foochow dialect is the mother tongue of the Foochow community in Sarikei while Mandarin is the language that

is shared among the Chinese communities in Sarikei, where English and Malay language are used among a small amount of residents in Sarikei. Through generalizing the opinions from the interviews with the Foochow natives, kindergarten teachers as well as researcher's personal experience of being a Foochow native in Sarikei, it is thought that the most striking features that set the Foochow dialect and Mandarin apart from English and Malay language in the Foochow community perhaps are the tone system in pronunciation, the use of consonance in pronunciation, the number of syllables per word, and the structure of sentences.

The Foochow dialect and Mandarin use a similar tone system for pronunciation; Mandarin has four tones known as Pinyin, while the Foochow dialect has a more complicated tone system as compared to Mandarin. Secondly, Foochow and Mandarin have less consonance in pronunciation and it's the use of consonance in words is distinctly different from the Malay language and English. For instance, the initial sound of the Foochow dialect and Mandarin pronunciation starts with a vowel, single or the most with two consonances and always end with a vowel, while English and Malay language uses consonance(s) for both its initial and final sounds in vast words. For Malay language, the syllables in a word are separated by consonance, a situation which is unnatural in the Foochow dialect and Mandarin language of pronunciation. Besides, the Foochow dialect and Mandarin have consonances 'ch', 'sh', and 'zh' at the initial sound of pronunciation, while English uses such consonances in its final tone. Thirdly, both the Foochow dialect and Mandarin are monosyllabic, which means that the vast majority of words have one syllable in length, in comparison to English and Malay which have more syllables in presenting a word. Finally, the structure of sentences is organized differently in the mentioned four languages. In particular, the Foochow dialect and Mandarin have a close organization in its sentence structures as compared to the other two languages.

METHODOLOGY

Respondents' Profile

In order to understand the present situation of music making among the kindergarten children in Sarikei, the principles and teachers of six kindergartens, which are located within 7 miles from Sarikei town, were interviewed. These kindergartens are privately organized, either attached to church directly or by the Management of Board of primary schools. The leaders of the management board and teachers interviewed are Foochow and ninety percent of the students from the six kindergartens are also Foochow. Mandarin is the teaching language used, while the Foochow dialect is used as the informal communication during recess time or as further explanation whenever is needed, particularly for the classes of four year old children. Meanwhile, English and Malay languages are rarely used as the medium of instruction in kindergartens in Sarikei. They are taught only according to the contents of the related language text books.

Singing with movement was found to be the most frequent music making activities in Sarikei kindergartens where children learned through imitation and repetition. Singing in Mandarin language had the highest preference, where seventy-six percent of the song collection was in Mandarin while the rest was in English language. It reflected the influence of Children Sunday School system in Sarikei churches in terms of teaching approach, activities conducted, and language used in singing. Indeed, most of the kindergarten teachers are Christian and also the teachers of Children Sunday School. Therefore, it is a common practice for them to adapt similar contents and approaches of the music teaching in the kindergartens.

In this study, two groups of respondents were randomly selected from two Sarikei kindergartens attending the music classes. Each group of the respondents consisted of four male and four female children aged six years having the Foochow family background. The living regions of the informants were within five miles distance from Sarikei town. They have no

music background and are now receiving formal preschool education in Sarikei kindergartens.

Teaching Setting

The teaching module consisted of twenty-four music lessons with constructed musical activities, with thirty minutes each. It is applied twice a week and the duration for completing the study is twelve weeks. The teaching materials used are based on the children songs that were collected during a preliminary survey on the musical practices among the kindergartens in Serdang and Sarikei in June-August, 2008. Besides the singing language, the selection of songs for the teaching module took into consideration the complexity of the song text, length of song, arrangement of songs, potential of song that could easily to be accommodated to different playing situations, and the balance of the contents in relation to the playing types of the teaching module to decide the song amount and song characteristics to be selected.

Musical activities were taught to two groups of children. The purposeful selection of singing language for each group of the respondents was to determine whether the different cultural contexts did affect the efficiency and quality of music learning. Group One (English and Malay songs) illustrated the usage of the language context which is totally different from the Foochow culture, while Group Two (Chinese songs) showed the significant existence of a specific cultural context in the selected community. On the other hand, Mandarin remained as the medium of instructions for both groups to maintain the usual teaching setting in the classroom of the Foochow community.

RESULTS AND DISCUSSION: SINGING AND PLAYING USING SONGS OF DIFFERENT LANGUAGES

Singing in Malay Language

Research by anthropologists has showed that the memory skills developed and functioned differently, depending on the cultural context

(Rogoff and Mistry, 1985). It is certainly true as children are singing in the Malay language, which is rarely practiced in the daily lives of these children. Hence, children were found to be difficult to manage, especially the pronunciation and the pace of memorisation. This directly contributed to the decline in sustaining children's interest, concentration level, and emotional condition. The result of a case when children singing a Malay song <Gelang Sipaku Gelang> [refer to Fig. 1] is given below.

*Gelang sipaku gelang
Gelang si rama-rama
Pulang marilah pulang
Marilah pulang bersama-sama.
(Stop!)*

**'Stop!'-children need to freeze as teacher call the word.*

Children were found to be unable to memorize the text even when they were at their fifth play. This singing section was led by the teacher with frequent reminder of singing together but received a passive response from the children. At the best, the children could remember only the first line of text and tended to mix up the second line with the first, while the rest were sung in fragments. The researcher also

found that the children, to some extent, refused to give more tries as they had low confidence in their ability in doing the Malay song. As children could not understand the text, it was hard for them to memorize.

Besides, a different system of phoneme combination further complicates their pronunciation. This could be another reason for their passive attitude. In such a situation, the physical movements accompanying the song, seemed to be easier to learn and were tended to be more active and dominant and hence distract the singing. As physical movements were clearly visible, it enables children to observe their peers' movements and this enhanced interaction among them. Indeed, children rarely had eye contact with the role model during the play, but seemed to focus only on the sequence of playing. Consonance was often omitted by the children. Their singing became less confident whenever there was an interval that was more than a week between the teachings of the same song.

However, the children were found to show high awareness towards the teacher's singing of <Gelang Sipaku Gelang>. Indeed, they seemed comfortable to stay just listening. When they were not asked to sing, the teacher's singing voice stimulated active physical responses and increased learning interest among the children.

4/4 Gelang Sipaku Gelang

5̣ | 1• 3̣ 5̣ 3̣ 3̣ 1̣ | 2 - - 5̣ |
Ge - lang si - pa - ku ge - lang, Ge -

| 1• 7̣ 2̣ 1̣ 1̣ 6̣ | 5̣ - - 2̣ 3̣ |
- lang si ra - ma - ra - ma. Pu -

| 4• 4̣ 6̣ 5̣ 5̣ 4̣ | 3• 3̣ 5̣ 4̣ 4̣ 3̣ |
- lang, ma - ri - lah pu - lang, ma - ri - lah pu -

| 2• 2̣ 4̣ 3̣ 3̣ 2̣ | 1 - - || ***Stop!**
- lang ber - sa - ma - sa - ma.

Fig. 1: Malay song - Gelang Sipaku Gelang

For instance, the children became excited towards the end of a song, starting from the third line of the text, anticipating the ‘Stop!’ at the end. They might not remember the text but they could recall with ease the sequence of the play as soon as they heard the singing.

Singing in the English Language

The result obtained for the singing in the English language remained insignificantly different from those singing in the Malay language. Similarly, the children were observed to have encountered the pronunciation and understanding difficulties regarding the song text. However, the children seemed to show a more positive learning attitude in singing the English songs as compared to Malay language. Below is an example of singing an English song <Charlie Over the Ocean> [refer to Fig. 2].

*Charlie over the ocean,
Charlie over the sea,
Charlie catches a big fish,
But can't catch me!*

*‘me!’: Children run around to catch fish.

The early stage of learning (the first three plays) showed a similar learning condition as in the Malay song <Gelang Sipaku Gelang>, where flat facial expression occurred, passive singing (soft voice, sing when instructions given) and stiff in terms of the body gesture. However, the learning pace showed a much faster progress than in <Gelang Sipaku Gelang>

as some of the children could memorize the text in a more complete manner started from the fourth play. It directly increased their singing interest and confidence level and hence ignored the distraction of pronunciation. For instance, children substituted the consonance with unclear vowel like ‘o’ (over), ‘ach’ (catch) to make up a complete singing phrase. This positive learning condition encouraged those who were in passive manner to join in the singing unconsciously. This situation was mentioned in the study by Toukoma and Skutnabb-Kangas (1977) who stated that the motivation of children to learn an unfamiliar language is tied closely to their attitude towards those fluent speakers, where the natural peer attachment produced a strong desire to follow with those who have learned. As the understanding of text had increased (ocean, sea, catch, big fish, can’t catch me), the interpretation of music became creative and musical. For instance, children sung in a rhythmic way by accentuating the first beat, holding hands together and waving according to the beat, doing rhythmic walking as marching, tapping on the target person exactly on the pick point of the song (me! - children tended to put a strong accent on it and used the dynamic of forte), and tended to go faster and louder towards the end of the song, as they were getting excited. These interpretations occurred without any instruction from the role model.

Haviland (1990) stated that culture could also explain the perceived environment. The positive attitude of the Foochow children towards the songs in English language has its relation to the schooling culture, where it was

TABLE 1
Songs commonly taught in dual languages among Sarikei kindergartens

English version	Mandarin version
Ten Little Indian boy	十个印地安男孩
Twinkle Twinkle Little Star	一闪一闪亮晶晶
Oh Mc Donald Had a Farm	王老先生有块地
Landon bridge is Falling Down	伦敦铁桥倒下来

4/4 Charlie Over the Ocean

| 5· 5 3 3 3 5 3 | 5· 5 3 3 3 5 - |
 Char-lie o-ver the o-cean, Char-lie o-ver the sea

| 5· 5 3· 3 5 3· 3 | 5 5 1 - ||
 Char-lie catch a, big fish but can't catch 'Me'!

Fig. 2: English song - Charlie Over the Ocean

more commonly used for music practice in comparison to the songs in the Malay language. However, English songs are used more for listening appreciation than for the teaching of singing. Indeed, among the total of eight English songs being collected among the Sarikei kindergartens, five of them were frequently being adapted to Mandarin text or taught in dual languages, as presented in the following table.

Teachers preferred teaching the song in Mandarin text before introducing the English version. According to the teacher, children could sustain for a longer concentration in learning the Mandarin version and it also prepares the children to learn faster in English version once they have become familiar with the previous version. Through observing the teaching and learning of <Twinkle Twinkle Little Star>, <Oh Mc Donald Had a Farm > and <London Bridge is Falling Down> in both Mandarin and English texts during children's ordinary music lessons, it was found that singing in Mandarin resulted in a lively performance, where children naturally sang using similar dynamic, moved their body to the pulse in group, sang with an accurate pronunciation, etc. In contrast, singing in the English text showed flat intonation and stiff physical movements as compared to Mandarin. In fact, there are children who could not remember the song texts although these songs were also taught to them when they were five year old.

Singing in Mandarin

Singing in the texts in Mandarin received the most supportive response from the children as compared to singing English and Malay songs. As the cultural language of the Foochow children, Mandarin and their preference in singing Mandarin songs reflected the choice of language affects and is affected by, their culture (Haviland, 1990). A familiar language enables a child to express easily, as no fear of making mistake (Duran Nolasco, 2009). Looking from the perspective of an anthropologist, Haviland (1990) mentioned that cultural learner takes the values and beliefs of their culture to interpret experience and generate their behaviour. For instance, singing in Mandarin demonstrated a strong sense of togetherness in terms of its pronunciation, body movements (rhythmic sense and creative movements), emotional conditions (positive learning attitude and imagination), and peer attachment (interpersonal skills).

The fast pace in learning and the smoothness in pronunciation (Mandarin) contributed to the consistency of singing sustainability during the play. Below is an example of singing a Mandarin song - <捕鱼歌> (Bu Yu Ge – The fishing song) [refer to Fig. 3].

白浪滔滔我不怕
 掌起舵儿往前划
 撒网下水到渔家
 捕条大鱼笑哈 (哈!)

*‘哈!’: Children run around to catch fish

This is an example that corresponds to the English song <Charlie Over the Ocean>, but with a much more complicated arrangement of text. The playing sequence of both the activities was exactly the same and it is also sung in a rote manner. As this song is commonly used in the kindergartens, children could pick up the texts and the actions even in the first two rounds of singing. The handling of singing and playing sequence was very independent, where children were able to sustain their singing even without the leading of the teacher. The excitement could clearly be seen through the singing dynamics (*forte*), bright vocal tone (with uncertain pitching), and with strong rhythmic sense in

singing. It was found that the facial and physical expressions of children were much richer than singing English and Malay songs. For instance, children smiled and showed high anticipation from their eye contact, giving signal to friends, frequently showing jumpy movements, shaking hands with excitement, and active interaction of eye contact among their peers.

Gonzalez (2003) stated that one's native language supports critical thinking, while Tucker (1996) claimed that the development of cognitive aspect lies on the usage of mother tongue as a basic of learning. Besides, Dunstan in the writing – *The Manual of Music*, argued that “teaching singing and teaching mother

4/4 捕鱼歌
(*<Bu Yu Ge> - The Fishing Song*)

| 1 3 23 21 | 5 5 5 - |
 白浪滔滔 我不怕,
bai lang tao tao wo bu pa
 (The whitecaps running high but I'm not afraid)

| 6 5 35 32 | 1 1 1 - |
 掌起舵儿 往前划
zhang qi duo er wang qian hua
 (Holding rudder, I row to forward)

| 1 1̇ 61 65 | 6 5 3̇ 2 |
 撒网下水 到渔家
sa wang xia sui dao yu jia
 (Casting the fishing net into the water,
 I reach the fishing village)

| 1 5 32 32 | 1 1 1 - ||
 捕条大鱼 笑哈哈(哈)
bu tiao da yu xiao ha ha
 (Caught a big fish, I Cheer!)

Fig. 3: Mandarin song - 捕鱼歌 (*<Bu Yu Ge> – The fishing song*)

tongue can be closely related where the early stage training in proper breathing and accurate pronunciation of speech sound (singing diction) contributes to good speaking as they are to sweet singing” (Dunstan, 2008). Apparently, singing in Mandarin provided a significant evidence that enables children to demonstrate outstanding musical interpretation even in the early stage of playing. In fact, children demonstrate strong ensemble skills by having a clear breathing point together, singing with an equal dynamic level, the same emotional condition and with an accurate articulation (children tended to allocate accent in some text, for instance ‘我不怕’, ‘往前划’, and 笑哈(哈!)). The sense of togetherness was found to cultivate peer attachment and at the same time led to strong rhythmic sense in music making. For instance, children held hands in a circle and waved according to the rhythm. Besides, children tended to take over the control of play where in many times, children went accelerated on their singing tempo without noticing that their teacher was actually trying to slow them down. Their awareness towards role model’s singing became less as they were in high concentration and had a strong desire in continuing the play. Indeed, the children could carry their singing to start a new round of play without any instruction or voice guidance from teacher.

Singing in the Foochow Dialect

The Foochow song below - <真鸟仔> (Jin Zou Yang – Sparrow) [refer to Fig. 4] is a Chinese folk tune of the children song which is popular among the Foochow community in Fujian, China (Chen *et al.*, 1951). The text of the song was modified by researcher to suit the present context of the Foochow community in Sarikei. As the Foochow song is no longer practiced among the Foochow community in Sarikei, there is no way to generalize the result of singing Foochow songs as what was done to other singing languages. However, the learning of <Jin Zou Yang> showed an outperform of children in relation to its learning pace, interest, motivation, musical expression, and learning

commitment as compared to other songs. Thus, it is believed that to present the results of learning this particular song could provide useful finding for future study.

真鸟仔

真鸟仔, 啄蒲菠, 六岁孩儿会唱歌
不是父母教他唱, 是他肚子通通歌
通通歌, 呀哎呀哎呀!

The learning pace of the Foochow song remained fast as in the Mandarin songs. The children showed a strong passion of singing and learning as compared to singing in other languages. Some action research conducted in Asia, Africa and South America reported during the fourth international workshop “Improving the Quality of Mother Tongue-based Literacy Programmes” from 18 to 22 June of 2007 in Dhaka, Bangladesh (organized by UNESCO Bangkok, in cooperation with UNESCO Dhaka) reported that the initial stage of literacy learning is much more efficient using the language the learner knows the best. In fact, the process of learning has automaticity and leads to the psycholinguistic guessing that relies on a deep understanding of the language itself (UNESCO, 2008). It is certainly true as children seemed to be attracted by the Foochow song even during the first lesson. They kept their eye view focussed when the teacher did the explanation of the text, they smiled happily as they heard the second line of the song text – ‘A six year sold child can sing’ (translated version), laughed happily when reaching the third line of the song text – ‘His stomach can sing very well’ (translated version) and doing jumpy movements. These relaxed and joyful learning phenomena have contributed to expressive singing and movements during the play. It was found that singing in Foochow dialect gave room to the children to move more musically. For instance, well controlled of physical movements, singing in pitch, precise in syncopated rhythm, waved the body gently according to the singing rhythm, creative spatial physical motions, and wider mouth shape while singing with lifted eyebrow. The facial

4/4 真鸟仔
(Jin Zou Yang - Sparrow)

| $\overset{\frown}{3\ 5}$ $\overset{\frown}{6\ i}$ 5 - | $\overset{\frown}{3\ 5}$ $\overset{\frown}{6\ i}$ 5 - |
 真 鸟 仔 啄 蒲 菠,
 jin zou yang dog pu po
 (A sparrow is pecking 'pu po' grass)

| $\overset{\frown}{5\ 5}$ $\overset{\frown}{5\ i}$ $\overset{\frown}{6\ i}$ 5 | $\overset{\frown}{3\ 2\ 3}$ $\overset{\frown}{5\ 3\ 2}$ 1 - |
 六 岁 孩 儿 会 唱 歌
 lüg hui nia ngo é quong go
 (A six years old child can sing)

| $\overset{\frown}{1\ 6}$ $\overset{\frown}{1\ 2}$ $\overset{\frown}{3\ 6}$ 5 | $\overset{\frown}{5\ 3\ 2}$ $\overset{\frown}{3\ 5}$ 2 - |
 不 是 爸 奶 教 伊 唱,
 ng ni ba né ga yi quong
 (It is not taught by the parents)

| $\overset{\frown}{5\ 5}$ $\overset{\frown}{5\ i}$ $\overset{\frown}{6\ i}$ 5 | $\overset{\frown}{3\ 2\ 3}$ $\overset{\frown}{5\ 3\ 2}$ 1 - |
 是 伊 腹 老 通 通 歌
 si yi bu lo tung tung go
 (His stomach can sing very well)

| $\overset{\frown}{3\cdot\ 2}$ $\overset{\frown}{1\cdot\ 2}$ $\overset{\frown}{3\cdot\ 5}$ | $\overset{\frown}{2\ 1}$ $\overset{\frown}{6\ 2}$ 1 - ||
 通 通 歌 , 呀 哎 呀 哎 呀!
 tung tung go ya ai ya ai ya
 (Singing well)

Fig. 4: Foochow song - 真鸟仔 (Zhen Niao Zi - Sparrow)

expressions were found richer as compared to singing in other languages, such as smiling throughout the entire play.

The children seemed to have a more closed attachment to this Foochow song than to the others. Parents provided their feedback that their children even performed for them at home. Children seemed excited when the song was reintroduced at their second play by answering in bright tone. They could remember the song and some of them even started to sing before instructions were given, showing jumpy movements with a big smile and more alert in sitting position (sitting straight and more forwarded position). This could be explained

using several reasons, as follows. Firstly, children felt more attached to the song as the Foochow dialect is closely related to their living environment. It is a tool of communication within the family and with friends, the most fluent and well-practiced language at their age and commonly heard in their daily lives. Secondly, the singing text in the Foochow dialect has its humour sense, where children felt entertaining and entertained while singing. For instance, 'his stomach can sing very well' (translated version) and children felt the sense of belonging when they sing 'A six years old child can sing' (translated version), as they were at the same age. The children felt joyful as they

reached these song texts and they tended to smile or laugh while looking around their peers, looking and tapping on their stomach, pointing hands to the stomach extensively.

CONCLUSIONS

Hence, does singing language matter in music learning? From the view point of an anthropologist, Haviland (1990) argued that culture is integrated, where all the cultural aspects of a cultural function as an integrated whole. The studies by Koelsch *et al.* (2005) pointed out the connection between music and speech which are corroborated by the finding of overlapping and shared neural resources for music and language processing in both adult and children, where it appears that at least in early age, human brain does not treat language and music as strictly separates, but rather language as a special case of music. Dunstan (2008) stated that “a child’s speaking voice should indeed be made musical no less than his singing voice”.

Seeing from the children’s perspective, it was found that their musical responses are very much influenced by their mother tongue(s), which are Mandarin and Foochow dialect. In particular, Mandarin and Foochow dialect are significantly well-practiced among the six-year-old respondents of this study as compared to other languages, namely Malay and English language. Therefore, the familiarity of the language provided the sense of belonging that could strengthen the confidence level of children, which then formed a significant ground in supporting children’s music learning. The fast learning pace of singing in the language of Mandarin and Foochow dialect provided an immediate satisfaction among the children as they could witness and enjoy their progressing improvement in music learning. On the contrary, if Malay or English languages were continuously used in the singing activities for the respondents, these would create tension that could become barriers in their music learning. In fact, these could cause children to shift their focus to gain satisfaction. This finding explains that children

from the Foochow community learn through the enculturation process and the learning progress becomes more effective if the teaching applies the language that is most familiar to them.

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APPENDIX A

The Preliminary Survey and the Song List of Teaching Module

The songs used in the teaching module are based on the preliminary study that surveyed on the common songs used in the kindergartens. The songs used at five kindergartens in Serdang, Selangor and six kindergartens in Sarikei, Sarawak were studied to identify the different cultural contexts in relation to the singing language (June – August, 2008). Songs collected from Serdang kindergartens were used to teach Group 1, while songs collected from Sarikei kindergartens were used to teach Group 2. It was found that the collection of songs for the kindergartens in Serdang and Sarikei were those that could commonly be found in the market. For Sarikei kindergartens, 90% of the Chinese songs are taught from generation to generation. However, these songs are not treated as traditional tunes but as common songs that are shared among the kindergartens in Foochow community (the statement based on the personal observations and the interviews with the educators and principles of kindergartens throughout the study conducted from June to November in 2008, in Sarikei, Sarawak). Below is the list of songs used in the teaching module.

APPENDIX B

The Teaching Module

The teaching themes used in the teaching module included ‘Birds and Bugs’, ‘Farm Animals’, ‘Wild Animals’, ‘Garden Animals’, ‘Marine Animals’, ‘Rainy Day’, ‘Sunny Day’, ‘A Picnic’, ‘My Weekend’, ‘Day of Adventure’, ‘Visiting the Fair’ and ‘Garden Work’. The types of the musical activity included in the teaching module are ‘singing with movements’, ‘rhythm play’, ‘listening awareness’ and ‘musical games’. Below are the sequence and contents of a music lesson.

English song	<Are you sleeping>, <Hello, how are you?>, <Head shoulder knee and toe>, <London Bridge is falling down>, <Twinkle twinkle little star>, <Charlie over the ocean>, <Birthday Song>, <Oh Mc Donald had a farm>.
	*<Head shoulder knee and toe>, <London Bridge is falling down>, <Twinkle twinkle little star>, <Birthday Song>, <Oh Mc Donald had a farm> are originally Western tune, but have been translated into Mandarin to teach the Foochow children.
Malay song	<Rasa Sayang>, <Legang-lengang kangkung>, *<Atas Bawah Goyang –goyang >, <Gelang Sipaku Gelang>.
	*<Atas Bawah Goyang –goyang > is originally in Chinese tune. The Chinese text of song has been replaced with Malay texts, which organize repetitively throughout the song.
Chinese song	<两只老虎>, <小蜜蜂>, <三轮车>, <我的公鸡不见了>, <造飞机>, <小朋友我们行个礼>, <世界的光>, <十个小孩>, <妈妈的眼睛>, <捕鱼歌>, <妹妹背着洋娃娃>, <当我们同在一起>, <泼水歌>, <小星星>, <茉莉花>, <只要我长大>, <泥娃娃>, <哈巴狗>, <拔萝卜>, <我愿做个好小孩>, <伦敦铁桥掉下来>, <王老先生有块地>, <靠着耶稣圣名>, <耶稣爱我>, <小兵丁>.
Foochow Song	<真鸟仔>

≈ Theme ≈

Section A : Warming up (5min)

Greeting song

Singing and movement

Section B : Main body (22min)

Lesson 1

Listening awareness

Singing and movement

Musical game/ Rhythm
play

Lesson 2

Listening awareness

Story telling and Drama acting

Singing and movement/

Rhythm play/ Musical game

Section C : Calming down (2min)

Rocking song (listening and movement)

Section D: Goodbye song (1min)

**min – minutes*



Malaysia's Foreign Policy towards Bosnia-Herzegovina 1992-1995

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ABSTRACT

This paper studies Malaysia's Foreign Policy on the Bosnia-Herzegovina war with Serbia in 1992 until 1995. This research was based on the analysis of the primary sources such as documents from Malaysia's Parliamentary debates, Malaysian newspapers and documents from the Public Records Office, London (PRO). Besides that, secondary sources were also referred. This article finds that the failure of the Western's and United States' policies in efficiently stopping the war in Serb-Bosnia War was the prominent factor that had caused Malaysia to play a vital role in the Bosnia Herzegovina crisis. The West's double standard and the practice of favouritism have been well-defined and showcased by America and the UN in solving the Bosnian issue that had ignited the Malaysian spirit to stand up and seek justice for Bosnians and to question the world body's credibility as a peacemaking agency. Malaysia's seriousness and deep concerned over the conflict had prompted other OIC countries to take up the issue to solve the problem in Bosnia. Malaysia, though not as great as America and any other Western countries, had given her contributions in distinctive ways. One of the significant ways was to deploy a peace keeping force in Bosnia under the UN umbrella. Her role in OIC had portrayed her staunch support and consistency in championing the fate of the Muslim community in Bosnian who needed realistic defence.

Keywords: Malaysia, Mahathir Mohamad, Bosnia-Herzegovina, Serbia, United States, United Nation

INTRODUCTION

Malaysia's foreign policy, like any other countries in the world, is formulated in response to the policies of its neighbouring countries or countries far from her, if not initiated on the basis of her national interest. Furthermore, in the era of globalisation, Malaysia could not afford to stand aloof from the international development taking place. Basically, Malaysia's foreign policies have always been influenced by the security factor. In par with its principles and based on its democratic spirit, Malaysia is against any invasion on human rights, especially in an independent country. Malaysia's stance can be observed clearly through its involvement in the United Nation's (hereinafter, UN) peacekeeping

missions since becoming a member of this world body since 1957. Among the countries in which Malaysia has taken part under the UN's flag are Cambodia, Somalia, Timor Leste, Palestinian, and Bosnia-Herzegovina. The Conflict in Bosnia-Herzegovina had caught the interest of the world communities when the country faced a war with Serbia just after Bosnia announced her independence in February 1992, through UN's recognition. The Serbian Republic of Bosnia and Herzegovina, proclaimed that Bosnia had declared independence from Yugoslavia against the wishes of its Serbian population. Therefore, it should not be recognised internationally (PRO, FO 973/701). It is important to note that Malaysia's role in Bosnia-Herzegovina was

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more outstanding compared to her involvement in other countries. Therefore, this article studies the factors for Malaysia's stance in its foreign policy towards Bosnia-Herzegovina. Apart from that, it is important to study Malaysia's role and contribution to Bosnia-Herzegovina.

THE FAILURE OF UNITED NATION (UN) AND WEST

Malaysia did not pay serious attention to the Bosnia-Herzegovina conflict at the initial stage as she was convinced of the capabilities of the UN and the Western powers, especially America, in restoring peace and justice in Bosnia-Herzegovina. Another factor in this conviction was the fact that fundamental human rights and democracy has generally been deeply respected by the western authorities, especially America. Furthermore, during William Jefferson Clinton or Bill Clinton nomination's campaign as President in 1992, America had openly promised to use the power within her means to stop the civil war in Bosnia (Rieff, 1996). However, America's policy was not effective in halting the war. On the contrary, it continued to protract. Malaysia agreed to and in fact welcomed proposals, particularly from a country like America, for active deployment of military operations to overcome the problem in Bosnia (Rieff, 1996). However, Malaysia was disappointed when America failed to go on with the proposed plan when they experienced opposition among UN member's and other European countries like Russia and France who did not agree with the utilization of military power to overcome the conflicts in Bosnia (Parliament, 27 April 1993). From the initial stage, Russia did not want any actions that could threaten Serbia to be adopted by NATO. Russia only wanted Serbia to comply with the UN's request, which was to stop attacks. Furthermore, Russia was hoping that NATO's plan to act on Serbia would be unsuccessful. Russia's stance was predictable because of the close cultural ties that both nations have had over hundreds of years, sharing similar language, alphabets, and religion (Parliament, 27 April 1993). In addition, Russia has been

a protector to Serbia in every conflicts faced by Serbia in Balkan. For example, she had involved and protected Serbia in the conflicts between Serbia and Austria-Hungary in July 1914 which eventually started the World War I in Europe (Azlizan, Jan. 2010). It is not surprising, therefore, to see Russia using her veto power to strengthen the international blockade to prevent the flow of arms supplies to Bosnian Muslim and Croatia (Azlizan, Jan. 2010).

Similarly, France had rejected economic sanction on Serbian. France also rejected the German's proposal to send servicemen to Serbia. France was in favour of Serbia's proposal on the division of Bosnia's provinces to form Greater Serbia (Azlizan, Jan 2010). Moreover, the French was confident that the then UN S-G Secretary General Boutros-Boutros Ghali was capable of bringing peace to the conflict without the intervention of military force. Although Britain did not agree with the Serb's activities, she did not protest the French's action because of her association with France. Britain doubted the effectiveness of air strike on Serbia, preferring instead on a more peaceful approach. To this effect, the Foreign and Commonwealth Office (hereafter, FCO) stated that, 'it would be better if you could name the official who minuted this statement (PRO, FO 973/700)'.

"There is also considerable risk that armed intervention including air strikes would compromise the massive international relief operation, vital for the population of Bosnia particularly in the coming winter months when the temperature will fall to freezing or below and when heavy snowfalls are likely." (PRO, FO 973/700)

Since Britain had no interest on military use, it did not see the need for NATO's involvement in the peace process. German is the only European power that agreed with the use of force on Serbia but France, Britain, and Russia wanted to minimize German's influence and rejected the recommendation.

Meanwhile, America under George Bush's administration seemed to adopt a lackadaisical attitude towards the conflict. His statement was, "I don't think anybody suggests that if there is a hiccup here or there or a conflict here or there that the United States is going to send troops (Guttman, 1993)." America had decided not to send their army to Bosnia-Herzegovina. In fact, the Secretary of State, Warren Christopher, also said to let the war alone, because they would stop when they get tired (Berita Harian, 6 April 1993). Of course, this statement did not make any sense.

The number of Muslims in Bosnia slew by the Serbs kept increasing since Serbia launched her attacks against the Muslim community. Besides, there were reports of a large number of Bosnian Muslim women being raped by the Serbian army. It was estimated that as many as 250,000 civilians who constituted women and children were the victims of Serbia's violence. As a result, a committee was set up to investigate the crime. The committee, set up by the European Council, was headed by Dame (PRO FO 973/701). In October 1992, the UN High Commission for Refugees estimated that some 2.5 million displaced people remained in the former Yugoslavia; over 1.3 million of these people depended on the outside help for shelter, food, and medicine to see them through the coming winter (PRO FO 973/701). The sufferings of the war victim were described as follows by the UN:

"even if peace were achieved tomorrow, hundreds of thousands of people would face hunger, sickness and homelessness." (PRO FO 973/701)

The situation turned worse in 1993 when the Croats also launched attacks on the Muslims in Bosnia. The Muslims had no weapons to fight back because of the arms embargo imposed by the West. On the contrary, the Serbs had modern weapons which they acquired from the Yugoslav National Army. Britain justified the embargo by saying that:

This would cut across our efforts to persuade all the parties that the issues cannot be resolved by military means. If the embargo were lifted on the Bosnian Muslims, other nations would start supplying the Serbs, thus intensifying and prolonging the conflict. (PRO, FO 973/701)

However, the reason for not providing arms was not acceptable because the Serbs were provided with weapons from Russia and many Muslims were killed because they had no weapons to protect themselves. The terrible brutality and suffering in Bosnia had caused the international community to demand military intervention by the UN. They believed that the presence of a military force under the UN mandate could have the desired effect of separating the warring factions and achieve peace. Nevertheless, Britain felt that:

Unfortunately separating the combatants would be immensely complex, probably require the use of considerable force and cause more bloodshed. It would add to the already immense difficulties of distributing humanitarian aid and might seriously disrupt it. The most likely outcome of international military intervention would be more deaths and increased misery for the survivors. (PRO, FO 973/700)

Hence, UN and America also did not help to supply any weapons to them. The US policy of not sending their army to Bosnia under Bush administration was continued by Bill Clinton when he took over the presidency. For America, the problems in Bosnia-Herzegovina were the results of the accumulation of hundreds of years of ethnic hostility and distrust, a disaster waiting to happen. Therefore, America felt the war justified and left the Serbian to their devices. The same stand was taken by Britain. Britain had

failed to stop the slaughter of the Muslims and had refused to send her army, on the basis that:

"We do not believe that military intervention is the best way to bring an end to the Yugoslav conflict. It could make an already serious situation worse. Military intervention would certainly add to the number of dead, not least because the relief effort now keeping thousands alive would end. Only a negotiated settlement will end the horrors" (PRO, FO 973/701).

The UN was equally ineffective in dealing with the problem in Bosnia-Herzegovina, resulting in a protracted war. Its Secretary General, Boutros-Boutros Ghali, claimed that Bosnia and Serbia were both too stubborn and had caused the negotiations to stall and peace difficult to achieve. The European Community and United Nation believed that the ethnic problem could only be solved if the opposing factions agreed to sit at the negotiation table and accept their differences (PRO, FO 973/701).

Malaysia viewed the reactions of the UN, America and other nations in Europe towards the war in Bosnia as unfair or one-sided and disappointing. Malaysia's parliamentary members, including the opposition parties, were united in condemning the double standard shown by the West in dealing with the Bosnian issue. As a member of the UN, Malaysia was frustrated with the failure of the world body to address the Bosnia-Herzegovina conflict. Malaysia had earlier believed that the UN was capable of resolving the conflict. As time passed and the number of Muslims' deaths increased, Malaysia became more and more disillusion. On her part, Malaysia had deployed a peacekeeping mission to assist in the peace efforts there. Domestically, PAS, the Islamic-based opposition party in Malaysia, had earlier accused the then Prime Minister, Dato' Seri Dr Mahathir Mohamed, of having Muslim blood on his hands in sending the Malaysian military force to Bosnia. Malaysia, under Mahathir's administration, had vocally

criticized America and the European Powers and called for justice for the Muslims in Bosnia. Malaysia felt that the UN was being used by the West for their own interest. Malaysia had no confidence that America and the UN could solve the Bosnian conflict transparently. Clinton did not seem to be committed in stopping the war in Bosnia (PRO, FO 973/701). In expressing his regret over the failure of the UN to act fairly on the problem in Bosnia-Herzegovina, Dr. Mahathir said,

"Need to be explained here that Malaysia involvement in UN peace keeping operation is base on the sovereignty principles of one country, justice and humanity and are not spurred by religion and politic. Time has come for the international community to review the roles of UN peacekeeping operation. UNPFOFOR's failure to stop Serb Bosnia's factional violence towards the Muslim and Bosnia Herzegovina Croat is a body blow to the effectiveness of UN peacekeeping Operation. There is no use for protector team to be sent if it cannot defend the public like what has been mandated" (Dato Seri Dr. Mahathir B. Mohamad, www.pmo.gov.my/ucapan, 1995)

Malaysia was also strongly against the US and Europe policies which did not want to abolish arms embargo to Bosnian fighters. America should have exerted her influence on her European allies to act fairly on Bosnia's arms issue but it failed to do so. It was observed that when America was ready to impose strict action in Bosnia, this was not supported by the European powers, and thus, preventing her from doing anything.' You mentioned that this statement was made by an officer from the National Affairs Department. However, this was not the case with Somalia and Iraq. The double standard showed by America was very clear because Bosnia was of no interest to America, as Iraq which is rich in oil and Somalia, in uranium.

Malaysia's frustration on the US policy and the European power was clearly voiced out by Mahathir, bringing into focus the sharp contrast between the Western's ethical obligations and their national interest (Dato Seri Dr. Mahathir B. Mohamad, www.pmo.gov.my/ucapan, 1993):

"...West was not shy to put behind their own justice principles if the act is necessary to their interest. In West Asia, they ostensibly act to protect Kuwaiti from the Iraq tyranny. They have acted in this manner because they claimed it is for humanitarian principle and justice but when Serb people acted savagely on Muslims openly, they gave many reasons to not take any action to fight the Serb"

The inability of the UN to stop the carnage against the Bosnians and Croats was what drove Malaysia to continue to put pressure on the world body. Mahathir was very vocal in his criticism against what he considered was a grave injustice to Bosnia. He utilized various diplomatic channels, such as the Organisation of the Islamic Countries (OIC), to garner support for the Bosnians and to convince the Islamic countries to send troops under the UN umbrella.

It can be said that the inability of the UN and the West to act with great urgency on the Bosnian conflict contributed to the great emphasis on Malaysia's foreign policy where Bosnia was concerned. Mahathir's decision to send peacekeeping force certainly defied the observation made by Robert Gray (write his position here), who believed that no country would be willing to send its servicemen to maintain law and ensure peace in Bosnia. Mahathir's motivation was driven by various factors, top of which was his long-standing belief in the basic principle of self-determination and peace for humanity (Berita Harian, 20 Jan. 1994).

INVASION ON HUMAN RIGHTS

The seriousness of Malaysia's Foreign Policy in Herzegovina's conflict, was also driven by its principle, which opposes invasion of any powers on the fundamental rights of one independent country. Tito's death and the disunity of Yugoslavia had contributed to the bad leadership in Balkan. Milosevic, who was elected as Serbia's President in May 1989, had used his power and role to continue the Greater Serbia ambition and gave speeches to civilians on the Battle of Kosovo (Kaufman, 2002). The invasion and violation on the basic human rights, which occurred in Bosnia, had made as many as 200,000 Bosnians war victims and as many as over two million lost their homes. Milosevic's war crime on the Bosnian Muslims was witnessed by the whole world. However, no immediate effort was taken by the West to end the massacre of Muslims despite the fact that (House of Representatives, 28 October 1993): 1) there were clear violations against the and human rights in Bosnia Herzegovina by the Serbian acts, 2) the continuous cruelty committed by Serbia against the Muslim population, 3) the failure of the UN Security Council in taking strong action against what was clearly Serbia's act of genocide and ethnic cleansing, 4) the boundary based on race descendants or religion could not bring permanent peace and solution. These were the reasons why Malaysia was very serious with the Bosnians. The seriousness of the case had prompted the Malaysian government to discuss it in her Parliament, whereby it was agreed that Malaysia would take up the following resolutions (House of Representatives, 28 October 1993). Among them are:

Hereby, Malaysia has taken resolutions:

1. Condemn the invasion and all human rights violation on Muslims in Bosnia Herzegovina, especially genocide and ethnic cleansing.
2. Request the UN Security Council to fulfil its responsibility by taking firm action and to carry out the Council's resolutions, especially:

- Free Sarajevo, the capital of Bosnia Herzegovina, from the Serb's threats and attacks.
 - press for the opening of Tuzla's airport which would enable food and medical supply to reach the war victims in Bosnia Herzegovina.
3. Urge the UN Security Council to withdraw the arms embargo which was imposed on Bosnia and press France and Britain not to block this effort.
 4. Present these resolutions to the Parliaments of all the relevant countries, especially Britain and France.

MAHATHIR'S STANCE (OR FIGHT) AGAINST INJUSTICE

Mahathir's stance against the injustice in Bosnia-Herzegovina was made clear from the very beginning. He was consistent in championing the fate of the Bosnians and this was made clear in many of his speeches. In one such speech, he reiterated that:

Malaysia is very concern with Bosnia Herzegovina's problem. This concern is based on various factors. This includes the basic principles that were developed to preserve the peace independent state and basic principles that have been developed to ensure the well-beings of the whole nation. Both of these factors, which were based on this concern, had motivated Malaysia to question UN role in solving Bosnia Herzegovina's issue. Based on this situation and development, Malaysia couldn't be silent and not to question the role of the responsible parties such as UN in solving the problem in Bosnia-Herzegovina and the prejudice behaviour of UN in solving the said issue and half-hearted UN's behaviour at ending that conflict (Ruhanie Ahmad, 1994) . These were the reasons which propelled Malaysia to question why

PBB actions looked like a comedy, half-hearted and Janus-faced in settling Bosnia Herzegovina's problem.

Due to these reasons, Malaysia will have to work hard to get the support of the world so that UN will be restructured again for global justice and equity. Malaysia will continue to convince the ally countries through Non-Aligned Movement (NAM), Organization of Islamic Countries (OIC), Commonwealth, South-South Dialogue and other related forum with us until BH's problem can be solved successfully. (Ruhanie Ahmad, 1994)

Malaysia stayed true to her principles throughout the conflict by sending her representatives to influence and convince other states at international gatherings, such as the UN conference and the OIC. Malaysia was of the opinion that America, not NATO, the UN or Europe, was capable of resolving the problem. This was because, at that time, Europe was not seen as an entity that was formed through political unification. Furthermore, all the political parties in Malaysia, including the opposition parties, had requested Malaysia to start an international campaign to remove Boutros-Boutros Ghali, the UN Secretary General for his failure to prevent the act of terrorism and ethnic cleansing by the Serbians. Malaysia also condemned NATO on its failure to protect the UN-proclaimed 'safe area' in Bosnia (House of Representatives, 14 August 1995). The war victims needed protection on the on-going rampage but the major power continued to dally and provide excuses.

ISLAM

It cannot be denied that Malaysia's internal factor had played a role in influencing the direction of her foreign policy in this particular conflict. As a nation whose population comprise

of Muslim majority, it was natural for Malaysia to speak against the atrocities committed against another Muslim community the world over. (Shanta Nair, 1997) Forty-four percent of the Bosnian population were Muslim descendants of Bosnian Slavs who converted to Islam after the Turkish conquest in the 15th century, while 32 percent were non-Muslim Serbs, and 17 percent were Croats (PRO, FO 972/714).

Moreover, in a country whose main political party, UMNO, comprises of predominantly Muslims members holding important government posts, such a support for the Muslim Bosnians was to be expected. Apart from UMNO, opposition parties like PAS and DAP (though not a Muslim-based party) also supported Malaysia's involvement in the Bosnia conflict when the outside world, especially the west, had procrastinated on the call for armistice. Although the PAS leaders and DAP had only a few common political aspirations with UMNO, they were united on the Bosnian issue, unanimously supporting the government's effort to fight for the ill-fated Bosnians when the issue was brought up in the Parliament. (House of Representatives, 28 August 1995) Despite the common link, Mahathir insisted that:

"Malaysia was very concerned with Bosnia-Herzegovina not merely because it is related to Islamic religion but we always concerned when and where a country is tyrannized by rampant injustice and oppression. Malaysia had also voiced its opinion with regards to South Africa, Cambodia and other non-Muslims country which face the similar problem." (Mohd Najib Tun Razak, 1996)

MALAYSIA'S ENGAGEMENT IN BOSNIA-HERZEGOVINA

In keeping to her words and in proving her seriousness in wanting to contribute to peace in Bosnia, Malaysia despatched her arm forces under the UN mission on 1 October 1993, under the command of Major General Dato'

Md Hashim Hussein. This team was known as Malbatt I which comprised of 996 members (Md Hashim Hussein, 1996). Malbatt's responsibility was to prevent the escalation of the war situation, prevent people from starving, provide medical assistance to the ill and be prepared to face armed conflicts even if they were not involved in military operation. These duties were carried out in many ways. First, they were to provide protection so that humanitarian aid could be delivered by cosmopolitan agencies to the area. Second, they were to assist the Bosnians so that they could live as normally and as decently as possible. Lastly, they were to engage in social activities, like building schools and bridges, to increase the people's standard of living in Bosnia (Mohd Najib Tun Razak, 1996).

This was the first Malaysian Armed Forces' (MAF) experience serving in a cold-climate European country compared with previous experiences that included servicing in hot-climate countries or countries having similar weather as Malaysia, such as Somalia, Cambodia and Namibia.

Moreover, the number of MAF's personnel sent was also bigger as compared to any of the previous missions. It was the first time that the MAF were given the mandate to manage ammunitions including tanks (Md Hashim Hussein, 1996). Malbatt's seriousness and efficiency in the operation in Bosnia were acknowledged and recognized by the UN. It was a proud moment for Malaysia when two officers were appointed at the UN Headquarters in New York. One was appointed as a four-star General and the other one was appointed as one-star General (Mohd Najib Tun Razak, 1996).

In keeping to her words and in proving her seriousness in wanting to contribute to peace in Bosnia, Malaysia despatched her arm forces under the UN's mission, in response to Resolution 776 of the UN Security Council in 1992. The Resolution, in turn, was the result of an appeal by the UNHCR for the world body to increase protective support for humanitarian convoys into Bosnia. Malaysia responded to the call for the placing of more UN Protection Force (UNPROFOR) by sending the Malaysian

Armed Forces (MAF) in February 1993. (PRO, FO 973/701). In February 1993, Malaysian Armed Forces joined UNPROFOR. The MAF's responsibility under UNPROFOR was to create peace and security in Bosnia-Herzegovina. The death of one MAF officer serving under UNPROFOR during an operation to clear mines off lands in Bosnia only served to reinforced Malaysia's stand to continue serving in the warring country longer. Malaysia was not satisfied when UNPROFOR failed to achieve its responsibility to carry out peace in Bosnia. The Bosnian Muslims continued to be targeted by the Serbs and were not given realistic protection (House of Representatives, 1993). The special representative from the UK for UNPROFOR was deemed an incompetent person. This is because UNPROFOR, which was placed under the representative's command, was making negotiations with the terrorists, when in the words of the British Defence Secretary, Malcolm Rifkind, under UNPROFOR:

"The troops are not there to fight their way through to their destination. That is not part of the UN mandate. The UNHCR and other humanitarian agencies will proceed on the basis of negotiated safe passage and with the consent of the warring parties. The purpose of the light military escort is to defer attacks and to deal with mines and other obstacles. The international forces are empowered, however to defend themselves if attacked." (PRO, FO 973/701).

This was unprofessional and the Malaysian troops were put in a difficult position due to such hypocrisy. UNPROFOR's failure to attain its objectives in Bosnia-Herzegovina was not only denounced by Malaysia, but also by other UN members and this caused the UN to pull back peacekeeping forces in December 1995. The withdrawal was replaced by NATO. Malbatt's strength was improved from 996 to 1533. Malbatt was renamed as MALCON or the First Malaysian Contingent. MALCON I started its

work on 1 March 1996 and stayed in Bosnia-Herzegovina until June 1996. MALCON's task was to implement military protection in the areas that were accountable under MALCON in Bosnia (Misi Pengaman PBB, TDM, Nation Protection Force In Bosnia-Herzegovina, <http://maf.mod.gov.my>). It was estimated that Malaysia had spend about RM94 million to finance the MAF's expenditure in the UN's peacekeeping mission in Bosnia-Herzegovina (House of Representatives, 5 May 1994).

MALAYSIA AND THE OIC ON THE BOSNIAN ISSUE

In April 1993, Malaysia called upon the OIC's member countries that convened in Karachi to unanimously support the proposal to have the UN revoke the arms embargo on Bosnian Muslims. The OIC conference agreed that Bosnians needed to have weapons to defend themselves from Serbia's terrorism. Malaysia had hoped that the pressure from OIC would enable the UN to take concrete action to stop the war. Malaysia also lobbied for the OIC to support her plans to enable the Malaysian troops in Bosnia to expand their responsibility from peace keeping to war operation, if required.

In addition, Malaysia had used her diplomatic influences to organize a meeting with the OIC in order to bring together the 13 leaders of the OIC countries at Putra World Trade Centre, Kuala Lumpur in 1995. Its focus was specifically to discuss the Bosnian issue (New Straits Time, 17 September, 1995). The OIC enlisted Pakistan, Morocco and Djibouti, who are also members of the UN, to step up pressure on the world organisation to revoke the arms embargo on Bosnia (Berita Harian, 5 Feb, 1993). At the meeting, the leaders of the Islamic countries also reaffirmed their continued support for Bosnia Herzegovina's sovereignty and her independence and requested that all member countries offer trade, and economic and technical assistance to help the Bosnian and Croatian governments to rebuild the damages caused by the war. Malaysia hoped that the OIC would cooperate with other international

organisations to provide effective assistance to the people of Bosnia-Herzegovina. At the same time, Malaysia also stressed and suggested that the OIC countries should extend humanity aid to Bosnia-Herzegovina (House of Representatives, 27 April, 1993).

Malaysia had also lobbied the UN, through 'the Contact Group' i.e. (small countries among the OIC members) inclusive of Malaysia', by actively maintaining relationship and negotiation with the UN so that they would continue to press and ensure that all the Muslim countries' views were taken into account by the UN. Active Contact Group members in New York had been pressuring the UN through letters and private statements that were issued by its Honourable Secretary. Malaysia acting as an OIC representative had also sent hard messages calling for the resignation of the then Secretary-General, Boutros Boutros Ghali, for his failure to solve Bosnian's conflict (House of Representatives, 14 August 1995). The moral pressure had him finally considering Malaysia's call.

In addition, Malaysia and the OIC implored to the UN to set up a special tribunal whose main responsibility was to investigate Serbia's cruelty on Bosnians (Berita Harian, 16 Feb 1993). This yielded a positive result when the UN agreed to form the special tribunal to question the former Serbian President Slobodan Milosevic. The OIC also requested that the UN stood firm and moved to re-establish Bosnia-Herzegovina's independence and sovereignty (House of Representatives, 10 May 1993). Through this conference, Malaysia also recommended that all countries have their authority to speak and play active roles in moving the world body (UN) to address the conflict on a universal track, rather than allowing any one country to monopolise or influence its decision.

What is important in the meeting among the OIC representatives from various countries, comprising of Defence Ministers and Chief Military, was that a stern action that OIC countries to help the Bosnian society had been taken. Meeting in Kuala Lumpur had given

awareness to the westerners to solve the conflict and to achieve peace (House of Representatives, 10 May 1993). OIC is one of the international diplomatic channels used by Malaysia to give pressure on UN and western country in relation to war in Bosnia. Malaysia also played an active role in international forums sponsored by OIC to find the best solutions to overcome Bosnian issue so that it would be accepted by the whole world.

CONCLUSIONS

The analysis in this article showed that Bosnia-Herzegovina had a firm place in Malaysia's foreign policy due to various factors. Malaysia was clearly frustrated by the lackadaisical attitude of America and the UN, who were slow in responding to the conflict. The double standard and favouritism present in their actions riled Mahathir, who was very vocal in his criticism. Malaysia was deeply disappointed with the former for failing to utilize her resources in squashing the rise of ethnic cleansing and questioned the credibility of the latter as a peacekeeping agency. Although some may view Malaysia's stance as being driven by a common issue, i.e. religion and by domestic pressure, Malaysia's deep involvement was also motivated by the need to stand against what she considered to be rampant injustice and oppression of the Bosnians. Malaysia had criticized the American and the western countries for dragging their feet in sponsoring the peace-making process in Bosnia. Malaysia, though not as great as America and any other Western countries, had given her contributions in distinctive ways. Malaysia's engagement in the UN peacekeeping missions, like UNPROFOR and Malbatt, served to prove her commitment to see peace in the conflicting territories. In addition, Malaysia had made her voice heard in international forums and lobbied the OIC to get justice for the Bosnians. The country had also pushed for the establishment of an international tribunal to bring the people responsible for the atrocities against the Bosnians to trial.

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Acculturation of Consumerism among the *Orang Asli* Community in Jelebu, Negeri Sembilan

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ABSTRACT

This article is based on the research results which were intended to identify consumerism trends among the *Orang Asli*, particularly with regards to purchase of luxury goods and management of their finances. The concept of consumerism refers to the motivation of an individual to identify himself or herself by means of a product or service, especially one which is commercially branded and denotes status. A total of 215 *Orang Asli* from five settlements in the district of Jelebu were involved in this study. Gathering of information was done by means of both qualitative and quantitative data collections. These include in-depth interviews and observations along with the simple random survey technique using questionnaires. Research findings show that consumerism among the *Orang Asli* does not differ much from other mainstream communities. They employ luxury items and services in very much the same way as done by other mainstream communities. From the aspect of financial management, however, they occupy the lowest rungs, and a substantial portion of their income is allocated for the purpose of procuring luxury goods. This is done to such an extent that it denies them the means for other more important and needed purposes. The implication of this research finding is that knowledge and information regarding the utilization and management of finances ought to be assimilated by the *Orang Asli* community, so that they do not become victims of modern-world hedonism and luxury brought about by the mainstream society.

Keywords: *Orang Asli*, consumerism, financial management, luxury goods, luxury services

INTRODUCTION

This article focuses on the acculturation of consumerism within the *Orang Asli* community, specifically in the District of Jelebu, Negeri Sembilan. The *Orang Asli* has long been in contact with the mainstream society and as a result, there have been changes among them in the realm of their consumer culture. The influence of globalization, which has accentuated consumerism, is difficult to be blocked from seeping into this community. As with other communities, the *Orang Asli* has been exposed to cash economy and consumerism. This

influence has crept, and continues to seep into this community's settlements, even though they are located in remote areas. Thus, consumerism culture among the *Orang Asli* can no longer be seen as being different from that of other communities. Yet, what has become a problem is that this community, which has been categorized as a minority and has long undergone consumer acculturation processes, has embraced the utilitarian culture which had previously been alien to them.

Consumerism among the *Orang Asli* society needs a different yardstick compared to the mainstream society. This is not only due

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to the isolated location of the *Orang Asli*, but also because the majority of them are classified as poor, not only financially but also from the standpoints of empowerment and knowledge. The obsession to indulge in the world of consumerism has caused this impoverished and weak community to fall victim to consumerism themselves. They often purchase goods at excessive prices due to their remote location. They have also been associated with having lack of knowledge and experience in managing their incomes, especially in planning their expenses. Moreover, exposure to the mass media and other socialization consumer agents has caused them to develop a need for these goods and services.

The underpinning research for the writing of this paper was conducted with the aim of analyzing the patterns of knowledge and behaviour pertaining to buying and using luxury services in the daily lives of the *Orang Asli* society. Beside that, it was also aimed at identifying the pattern of financial management among the *Orang Asli* community. This article is divided into three main parts. The first part deals with literature analysis, that is, exploring the background of the *Orang Asli* community within the context of development. This is important to survey the development of the *Orang Asli* community and their economic standing. Following this, the second part concerns with the methodologies of this study, and the third part consists of research findings in relation to the patterns of knowledge and behaviour pertaining to buying and using luxury services, taking into account the objectives of this study, and a discussion of the research findings from the viewpoint of purchasing and financial management.

REVIEW OF LITERATURE

The *Orang Asli* forms the minority community, be it from location, social, psychological or economic aspects. However, a small segment of this community has been assimilated into the mainstream Malaysian community. The 2006 population survey showed that the population of the *Orang Asli* totalled to 141,234 in Peninsula

Malaysia (JHEOA 2006). They are made up of three tribes, namely Senoi, Proto-Malays, and Negrito (Source JHEOA, 2008). The Senoi forms the largest group with a total population of 78,884 (58.85 percent), followed by Proto-Malays, numbering 58,675 (41.55 percent) and Negritos at 3,671 (2.60 percent) (JHEOA, 2006). In terms of numbers, they can be categorized as a minority group based on the fact that they make up only 0.5 percent of the total Malaysian population. In terms of the distribution of their settlements, it was found that 8.9 percent of the *Orang Asli* live in cities and towns, 2.4 percent in small towns, and 88.7 percent still live in the rural areas (Statistics Department, 1997; Nicholas, 2000: 18). Meanwhile, there were 576 *penghulu/batin* (headmen) in the *Orang Asli* society in 2004 (JHEOA, 2004, p. 6).

Research on the acculturation of consumerism process among the *Orang Asli* has given a better understanding of the dynamism of the culture which underlies their consumer behaviour. Acculturation, as defined by the Meriam-Webster Online Dictionary, refers to the modification of individual or group culture, or people, whereby they adopt or borrow traits from other cultures. It also refers to the fusion of cultures due to prolonged contact. Likewise, acculturation as defined by the Online Dictionary of Social Sciences refers to a process of cultural transformation initiated by the contacts between the different cultures. According to Liu (2000), acculturation is the changes in an individual's value, attitude, and behaviour due to his or her direct contact with a culture other than his or her original culture. Acculturation influences consumer behaviour in two ways, namely through consumer re-socialization and through the acculturating individual's self-management.

Meanwhile, consumerism is a concept used to describe a situation in which the happiness of an individual is linked with the purchase, ownership, and usage of goods. Consumerism is used to describe the desire of people to identify themselves with products and services which they use, particularly commercially branded goods which can elevate their status, as in the case of luxury goods (Ma'rof and Sarjit, 2008).

In short, a culture that has been pervaded by consumerism can be referred to as a utilitarian culture.

The acculturation of consumerism represents one aspect of acculturation and socialisation. While acculturation is more general, acculturation of consumerism is more specific and it refers to the process of utilitarianism (Ma'rof and Sarjit, 2008). The acculturation of consumerism may be viewed as a socialization process, in which an individual learns consumer behaviour patterns, attitudes and values of a culture which differ from those of their own (Lee, 1988). At the same time, acculturation refers to a phenomenon which results when groups of individuals, having different cultures, undergo continual contact between them and the consequence is that there is change in either one group or in both the groups (Redfield, Linton and Herskovits, 1936, p. 149).

Changes may occur in the dominant culture, the sub-culture or in both the groups. According to Berry (1997), in practice, acculturation is more inclined to produce greater significant changes in one of the groups. The acculturation of consumerism of the minority group is typically determined by the extent to which they are able to adapt to the new consumer culture (as suggested by Magna *et al.*, 1996) and results in behavioural changes that arise out of this contact (Ward and Arzu, 1999). Culture does not only influence the method of producing but also influence the ways in which it is used. Moreover, culture plays an important role to determine product usage (Husniyah and Zuroni, 2002). According to Cleveland, Laroche, Pons and Kastoun (2009), the acquirement of new cultural traits and the loss of traditional ones vary from trait to trait. The consequence is that ethnic groups or individuals can demonstrate one acculturation pattern for certain customs and situations, while exhibiting another pattern for others. Selective acculturation helps to explain the tendency of minorities to adopt certain strategic traits in order to improve their

living prospects while retaining other native cultural values and traditions. Following these perspectives, cultural adaptation can be considered as flexible or heterogenic rather than fixed. Likewise, it focuses on identifying which acculturation patterns will result from what consumption contexts.

METHODOLOGY

The quantitative approach, together with the simple random survey technique using questionnaires to obtain descriptive information, was used in this study. The questionnaire was divided into six main sections, namely background of respondent, economic capital, ownership and purchase, value, behaviour and financial management, and resolving of financial problems. However, this article is concerned with only three of the aspects, namely respondents' background, ownership and purchase, and behaviour and financial management. On top of that, this research also utilized a qualitative approach which included in-depth interviews and observations.

The study was carried out in five *Orang Asli* communities living in Jelebu, Negeri Sembilan. These communities were from Kampung *Orang Asli* Bertam, Kampung *Orang Asli* Jeram Lesung, Kampung *Orang Asli* Parit Gong, Kampung *Orang Asli* Putra, and Kampung *Orang Asli* Tohor. A total of 215 respondents from the five *Orang Asli* villages in Jelebu, Negeri Sembilan, were involved in the present study. The selection of these respondents was done through a simple random sampling, namely the head of the family or the father who managed the expenses of the family, working mothers who managed the family finances, non-working mothers who made frequent purchases, working youths who managed finances as well as non-working youths who made frequent purchases. The age of the respondents ranged from 18 to 70 years. The data gathered were descriptively analyzed using the Statistical Package for Social Sciences *SPSS 13.0 for Windows*.

RESEARCH FINDINGS AND DISCUSSION

Demographic Background

This research was carried out in five *Orang Asli* community settlements situated in Jelebu district, Negeri Sembilan. These communities were the *Orang Asli* residents of Kampung *Orang Asli* Bertam, Kampung *Orang Asli* Jeram Lesung, Kampung *Orang Asli* Parit Gong, Kampung *Orang Asli* Putra, and Kampung *Orang Asli* Tohor. Kampung Parit Gong and Kampung Putra can be categorized as suburban areas, i.e. the areas which are within 10 kilometres from the main roads and have the characteristics such as being neighbours to Malay villages, experienced marked social changes, and their dependence on the forest for economic resources is less than 10 percent (Ramlee, 2001; JHEOA, 2004). Based on these features, these two areas were chosen as the research locations. Meanwhile, Kampung Jeram Lesung, Kampung Bertam, and Kampung Tohor were categorized as remote areas, as they are located more than 10 kilometres from the main roads. Remote areas are classified as those that are situated more than 10 kilometres from the main roads and these villages are classified as backward (JHEOA, 2004).

The main sub-tribe that resides here is the Temuan, which belongs to the Proto Malay tribal group. According to Nicholas (2000), the Proto Malay tribes are the people who live a settled life (as compared to the Negrito), and they are mainly involved in farming, rubber tapping, and fishing. There are also a considerable number of them who are engaged in commercial and professional activities, especially in Kampung Putra which is classified as a developing area by the JHEOA, Jebebu District (JHEOA, 2008). The information from the JHEOA Jebebu district census of 2008 reveals that the population of Kampung *Orang Asli* Bertam comprises of 76 residents, Kampung *Orang Asli* Jeram Lesung (47 residents), Kampung *Orang Asli* Parit Gong (321 residents), Kampung *Orang Asli* Putra (202 residents), while Kampung *Orang Asli* Tohor has 214 residents. Therefore, the total number of *Orang Asli* residents in the Jebebu

district was 1123 people (JHEOA Jebebu District, 2008 Census). As for the sub-urban areas, even though its location is close to the jungle, the *Orang Asli* community in this area has a relatively good accessibility to such amenities as piped water, electricity supply, primary schools, mosques, and roads that connect these areas with other surrounding areas.

As for the remote areas, however, the basic facilities such as schools and clinics are not provided. Thus, the school dropout rate here is apparent. Through interviews and observation, it was found that the children in these areas do not have the motivation to attend school and the attendance at school is quite unsatisfactory. Meanwhile, the quantitative data from this research show that 49.5 percent of the children here have never attended school, 31.6 percent are attending primary school, and 18.9 percent are attending secondary school. Those who have never attended school consist mainly of adults. They claimed that the children in these areas prefer helping their parents at the rubber smallholdings, and collecting fern shoots and banana leaves. In terms of faith, the majority of the residents here generally practice animism, although there are some amongst them who have converted to Islam and Christianity.

Financial Management and Spending Behaviour

Even though the majority of the *Orang Asli* in the research area has low income, this study was done to determine if they are practicing financial management. Financial management encompasses four main aspects, namely financial management has to be based on a holistic financial planning, income needs to be sufficient for meeting expenses, expenses have to be controlled, and financial management must be able to solve financial problems (Jariah, 1987). The average income of the *Orang Asli* society in this research area ranged between RM300 and RM450 per month.

In general, the researched *Orang Asli* community did not have good financial planning. This situation is understandable given the fact

that the majority of them do not have a high income. Thus, a careful planning is necessary to ensure that their income is able to cover their needs. Most individuals are aware of the facts such as the importance of managing limited resources (Bertisch, 1994; Garmen and Fogue, 2007), that financial management is a vital aspect in household life (Karen, 1988; Garmen and Fogue, 2007), and that financial problems can arise due to failure to control financial affairs (Hallman *et al.*, 1993). Research findings show that only a small portion of the *Orang Asli* has this realization. For example, 82.9 percent of the *Orang Asli*, especially those in the remote areas, believe that their income is not sufficient to meet their daily needs so they have to obtain their necessities on credit. Meanwhile, the data show that 52.6 percent of the *Orang Asli* is in debt. They reasoned this as resulting from their limited income, no time for income management, and most of it tends to get used up. Based on observation, the *Orang Asli* in this research has a strong desire to possess luxurious things which then urge them to accept loans and debt. In order to possess any electrical items, for instance, the people can make a full payment or via instalment.

At the same time, the data reveal that 67.4 percent of the *Orang Asli* do not possess or perform savings, while 56.3 percent stated that they use up all their income for daily needs and to repay debts. Even contingency savings are neglected, whereby 70.7 percent do not have savings to meet emergency expenses. This shows that the majority of the researched *Orang Asli* lives in dire conditions with financial problems. This financial problem comes about when the wants and desires of the individuals constantly influence spending decisions (Danes and Haberman, 2007). Money is a means for people to obtain food, shelter, comforts of life, happiness, and peace while leading their lives (Mate, 1991). Thus, without an adequate amount of money, man can be at a low level of happiness or contentment. In the remote areas, the level of income is only sufficient for the family to subsist. In this situation, it is impossible to have

savings as there is simply no extra income to put aside for savings. Furthermore, when it comes to possession of luxurious things, the *Orang Asli* community has failed to differentiate between necessities and desire. Therefore, due to lack of relevant knowledge, they end up purchase things that are merely based on their desire and have to bear financial burden.

Consumerism Acculturation among the Orang Asli

Consumer utilitarianism among the *Orang Asli* community shows a socialization process, whereby they, as consumers, are marginalized. They learned behaviour patterns, attitudes, and utilitarian values from the mainstream culture that are quite different from that of their original culture. As a community that exists in the researched areas, the *Orang Asli* occupy a position which is easily recognizable by other communities (based on the way of life and physical traits). They have continuously acculturated their utilitarian or consumer culture according to the mainstream culture of the majority group (particularly Malay culture). This has taken place in one direction only, in which the consumer culture of the *Orang Asli* has altered towards accepting the consumer culture of the larger society, but not the other way around.

Throughout the study, it was found that the *Orang Asli* communities in the researched areas have already undergone a lot of changes that similar to those of *Orang Asli* elsewhere, especially with regards to material possessions. This is particularly true among those who are living in the urban areas. Based on the interviews conducted with the *Orang Asli*, the concept of luxury goods and services as perceived by them are electrical items (refrigerator, television, rice cooker, etc.). Although the general society may consider these to be necessities, for the *Orang Asli*, these are luxury goods because they have not been able to afford to possess these goods. Meanwhile, ornamental items like jewellery, watches, and cameras are also considered as luxury goods by them.

Now, they are increasingly exposed to goods from the outside which have been brought into their community by vendors or by certain members of the *Orang Asli* themselves. Possession of these goods, which are considered as 'luxuries', is in line with the acculturation process which they have undergone. Along with this, there are many other factors which contribute towards the hastening or slowing of the consumer acculturation process, besides the financial aspect. Among them, as stressed by Godwin and Carroll (1986), as well as Baily and Lown (1993), are demographic factors

such as age, sex, occupation, knowledge of consumerism, level of education, and attitude towards goods purchased. If analyzed closely, all these factors would be found to play a role in moderating the relationship between acculturation and consumer behaviour among the *Orang Asli*. Undoubtedly, these factors determine or influence the acculturation process and utilitarian culture among them. This can be seen in the instance whereby consumer acculturation is more clearly evident in Kampung Parit Gong and Kampung Putra, where the people are more exposed and open in terms of

TABLE 1
Percentage distribution of respondents according to knowledge and purchased of luxury goods (N=215)

Luxury goods purchased	Knowledge		Have purchased	
	Yes	No	Yes	No
Food				
KFC	66.5	33.5	15	85
McDonald	67	33	10.2	89.8
Pizza Hut	65.1	34.9	8.4	91.6
'Mamak' shop	74.4	25.6	26.6	73.4
Restaurant	75.2	24.8	28	72
Furniture/Electrical goods				
Singer	69.8	30.2	21.4	78.6
Seng Heng	53.3	46.7	3.3	96.3
Courts Mammoth	57.2	42.8	7.9	91.6
Beauty & health				
Avon	56.7	43.3	12.1	87.9
Spa	41.9	58.1	-	100
Saloon	41.9	58.1	3.3	96.7
Daily necessities				
7-Eleven	54.9	45.1	11.6	88.4
Tesco	53.5	46.5	11.6	88.4
Giant	54	46	14.9	85.1
Carrefour	45.1	54.9	6	94
Eonsave	44.1	55.9	6	94
Mydin	46.5	53.5	8.4	91.6

Note: All figures are percentages

location as compared to other villages which are comparatively more remote and where villagers are relatively more bound to their traditional lifestyles

The luxury services mentioned in the study include banks, trains, post offices, and some other services. The *Orang Asli* feel these are luxury services as these services do not exist at their villages. The possession and use of goods and services that are considered as luxuries reflect the occurrence of consumer adaptation processes in this community. The goods that they possess have been purchased from nearby towns like Pekan Chennah, Pekan Simpang Durian, and Simpang Pertang. The goods bought at these towns include furniture, electrical appliances, and vehicles. Table 1 shows the data of purchases and their knowledge of these goods.

Apparently, the *Orang Asli* community has awareness and knows of the luxury goods which are available. These data show that the *Orang Asli* community is aware of the higher end eating outlets like restaurants (75.2 percent), McDonald (67 percent), and KFC (66.5 percent). They know of these establishments through the mass media like television, radio, and others. Beside these, they also come to know of these places through social contacts, such as friends, neighbours, colleagues at work, and other means of information broadcasting. However, the *Orang Asli* society does not spend much at these places due to cash shortage and the remoteness of their settlements. These constraints cause them not to spend much in such places. Research data also show that the *Orang Asli* purchase furniture at Singer (21.4 percent), beauty products at Avon (12.1 percent), and daily necessities at Giant supermarket (14.9 percent). It can be deduced that consumerism among the *Orang Asli* has begun to expand, along with the mainstream developed society. They already have the knowledge about the luxury goods available, even though financial and location constraints cause a majority of them to be unable to spend money and own goods from these establishments.

Among the *Orang Asli*, there are also those who have already used modern banking

and health facilities. There is a small segment of them who save in banks and use banking services for certain financial transactions, such as repayment of loans. A large portion of them have used medical services, such as the government hospitals and clinics. The data show that 91.6 percent of them have been to the hospital which is located at the nearest town and have visited the government clinic which is located near their settlement. There are also amongst them those who have also used private clinic services (by paying); this figure stands at 58.1 percent. Though they have stated that there is a bomoh (traditional medicine man) at their settlement, they only resort to the bomoh for remedy of disorders related to 'spirit'. Ailments which are obvious from the biological aspect, such as physical injuries, are usually referred to clinics or hospitals.

The *Orang Asli* has also been known for using Astro (satellite television), especially those who reside in remote areas. This is because in remote areas, it is difficult to receive normal television station broadcast, so they resort to using Astro services. The data revealed that 23.7 percent of respondents have used Astro services. Meanwhile, the use of cellular phones has also become a matter of necessity, especially among the youths. This communication system has seeped into the lives of the *Orang Asli* community. The gathered data showed that 50.2 percent of the *Orang Asli* use handphones. Thus, luxury services have fundamentally started to be developed among the *Orang Asli*. However, financial problems remain a constraint in the ownership and using of these services. Table 2 shows the knowledge and usage of luxury services among the *Orang Asli* community.

The adoption of consumerism among the *Orang Asli* community in the research areas was derived from many factors, aside from the factor of cash possession. Among them, as emphasized by Godwin and Carroll (1986) and Baily and Lown (1993), are the factors such as age, sex, occupation, consumer knowledge, level of education, and attitude towards goods and services. Based on the observation carried out in this research, these

TABLE 2
Percentage distribution of respondents according to knowledge and usage of luxury services (N=215)

Usage of luxury services	Knowledge		Have purchased	
	Yes	No	Yes	No
Telecommunication				
Astro	78.1	21.9	23.7	76.3
Internet	45.3	54.7	1.9	98.1
Handphone	89.8	10.2	50.2	49.8
Transport				
Express bus	94.4	5.6	45.1	54.9
LRT	52.6	47.4	7	93
Commuter/Train	62.4	37.6	8	92
Taxi	93.5	6.5	46.4	53.6
Medical				
Clinic/ Govt. hospital	100	-	91.6	8.4
Clinic/ Private hospital	87	13	58.1	41.9
Dental clinic	86	14	52.8	47.2
Despatch				
Express post	50.2	49.8	20.1	79.9
Fax	22.3	77.7	2.8	97.2
Savings and Mortgage				
Bank	88.8	11.2	40.8	59.2
Pawn shop	76.5	23.5	6.5	93.5

Note: All figures are percentages

factors play roles in moderating the relationship between consumerism and consumer behaviour. Besides, the location clearly plays a part in facilitating the embracing of consumerism. The observation in the research area also found that consumerism has become more apparent in *Orang Asli* villages that are located at the outskirts of towns or suburban areas compared with those in the remote areas. This is because the suburban community lives in an area where it is organized, with the presence of facilities, such as roads, housing, water and electricity supply, and shops which are reasonably stocked. Meanwhile, the interaction between these *Orang Asli* communities and the outside community

occurs with greater ease here and thus, the *Orang Asli* tends to be more exposed to the consumerism of the mainstream community.

Along with that, the adoption of consumerism among the *Orang Asli* happens through contact, whereby they manage to gain information through contact with others. Adoption is positively associated with the action of the individuals in seeking various information sources pertaining to products and it is also closely and positively related with the motivation of one to find advertisements in order to get that knowledge and also using friends as a means of getting information regarding a certain product (Gordon, 1964; D'Rozario

and Douglas, 1999). Due to this, the exposure factor plays an important role. However, one interesting fact is the dawning of realization among the *Orang Asli* who are bold enough to assert that the mass media often attempts to portray certain social realities in a distorted and false manner. The mass media rarely present knowledge related to consumer skills, such as the information on prices and knowledge of specific product. To them, the mass media is more interested in portraying easy applications and also the lives of the wealthy. Views of this nature have actually been forwarded by O'Guinn and Faber (1987). For example, the interviews revealed that individuals who are freshly exposed to new products have the perception that the social reality of the mainstream society (as depicted by the television programme) is biased towards the lives of the wealthy. This realization is quite apparent amongst the adult *Orang Asli* who are not much interested in mass media advertisements, especially television advertisements. Based on the interview with one of the informants, the following was obtained:

"I am satisfied with everything I have now. Those things they advertised on the television are too expensive and I can't afford". (Nyak Bin Lagan)¹

The older group displays lack of interest in aping and accepting what is being promoted by the mass media. However, the negative effects of advertisements shown by the mass media have had a considerable impact on the lives of some of the *Orang Asli*. There have been cases where they have sold their products, such as chicken eggs and vegetables, solely to purchase food that is inferior in nutritional value such as instant noodles, which is widely advertised on television. According to one of the informants:

"I am selling vegetables and eggs. Then, the profit I will use to buy Maggie (instant noodles) to these kids." (Satam Bin Ilak).²

The *Orang Asli* children also spend a lot of money buying food stuff which is less nutritious especially junk food and snacks.

CONCLUSIONS

This article has focused on acculturation of consumerism among the *Orang Asli* community in the Jelebu district, Negeri Sembilan. The *Orang Asli* community, just like any other communities, has found itself being absorbed into the Malaysian mainstream culture. On the whole, the *Orang Asli* has increasingly been exposed to consumerism, which has resulted in them adopting a consumerist culture. However, they do not have the ample knowledge related to financial management and at the same time, they have become 'victims' of the business community who have attempted to maximize their profits at the expense of the position and vulnerability of the *Orang Asli*. Moreover, they have become the targets for luxury goods but they do not have the means of buying these goods and end up being trapped in debt. Thus, it is necessary to expose to this society, which has been termed as a marginalized society, to consumerism-related knowledge.

In the past, the *Orang Asli* community depended on goods which they produce themselves and they led a self-sufficient, subsistence life. At present, however, they have adapted themselves to the use of industrial products which have come from outside their community. This situation has made them more and more dependent on commercially made products. In this regard, money has come to play a major role as a medium of exchange to procure the needed goods. Consequently, their traditional goods and services have been sidelined. Their involvement in the consumerism and market economy has eroded their cultural domain and has finally brought to the extinction of their traditional knowledge. If this situation was to continue, the *Orang Asli* would lose their culture and subsequently, their identity as well. At the same time, portions of the *Orang Asli* are fast becoming victims of consumerism. They are not equipped with the knowledge related to financial

management. They frequently fall victim to traders who always try to make easy gains at the expense of the weak position of the *Orang Asli*. In addition, they have become the targets of luxury goods advertising but do not have the financial means to buy them with cash payment. That being the case, most of them are trapped and saddled with debts. The factors of lack of money and the overwhelming desire to possess certain goods have caused them to choose goods which are inferior in quality and ended up being exploited by traders. It is an undeniable fact that consumer adaptation is an unavoidable process in any community and the *Orang Asli* is no exception to this. However, what is more disturbing is that this minority community has frequently fallen victims to consumerism because of their vulnerable position.

ENDNOTES

¹Nyak Bin Lagan, 48 years old, rubber tapper, no educational background.

²Satam Bin Ilak, 38 years old, farmer, receive education until Standard 5.

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Toni Morrison's Paradise: The Unreliable Narrator

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ABSTRACT

Previous critical readings of Toni Morrison's novels, especially *Paradise*, largely emphasise the universal themes explored in her novels, namely, feminism, culture, psychology, and of course, her remarkable presentation of African-Americans in racial and cultural conflicts. Yet, there are major areas that remain unexplored in her works. One of the most conspicuous absences is Morrison's dominance over the art of narration. Narratology, as a science, studies the ways in which narration and narrators help us shape our perceptions of reality, cultural artifacts, clichés, etc. Needless to say, it is Morrison's ceaseless dominance and control over the art of narration that take her novels, including *Paradise*, to a new level and style - a modern style, which Roland Barthes refers to as the "writerly text." By setting the science of narration as the cornerstone of this paper, the following notions will receive a proper narratological definition: (a) how the various stories, initially narrated by unrelated characters are juxtaposed against each other to convey a single plot/storyline, and (b) how a singular omniscient/omnipresent narrator is unable to lead the narrative towards a satisfactory ending. In order to investigate the significance of utilising a labyrinthine narrative form in modern texts, this paper studies the variety and relevance of the employed forms of narration, through the interdisciplinary science of narratology.

Keywords: American Cultural Studies, Interdisciplinary Literary Studies, Narratology, Psychoanalysis, Toni Morrison

INTRODUCTION

Paradise (1999), the seventh novel by Toni Morrison, can be considered the finale of her linked series of novels, beginning with *Beloved* (1987), and including *Jazz* (1992). As most critics claim, the aforementioned novels function as more of a trilogy than separate novels carrying separate voices.¹ Nevertheless, *Paradise* stands apart in terms of its multi-textured story, its diversity of narrators and, most notably, the versatility of narration, compared to her preceding novels. Previous critical readings of Morrison's works, especially *Paradise*, have for the most part addressed her more universal themes: including feminism,

culture, psychology, and conflictive issues.² An absence, however, from this wealth of critical discussion is Morrison's dominance over the art of narration.

Narratology, the science of narration, reveals a literary critical conscience of the following aspects in the specific case of *Paradise*: (a) a multithreaded beginning that eventually leads towards a unified ending, thus explaining the presence of all 'character-narrators' within the novel; (b) how the separate stories, initially narrated by these unrelated character-narrators, are carefully and pertinently juxtaposed to convey a single plot/storyline; and finally, (c) how a singular omniscient and/or omnipresent narrator would inevitably prove to

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be incompetent in guiding the narrative towards a proper closure or ending.

In order to examine how the narrative of *Paradise*, through such a clandestine narratorial voice, keeps up with the sum of a multi-dimensional narrative, narratology should first be explained. Narratology examines the distinctive ways in which a narrative establishes and constructs our perception towards an understanding of the world that surrounds us. This relative 'world' includes notions which are formed as the result of social interactions, such as cultural and national artefacts, clichés, societal norms, 'dos and don'ts,' psychological, historical, and cultural aspects. In the words of Hayden White (1987), narratology is "a meta-code, a human universal [code] on the basis of which transcultural messages about the nature of a shared reality can be transmitted" (pp. 13-14).

Despite the fact that the science of narration is firmly rooted in a structuralistic reading of literature and its relevant framework (p. 14), such a universal meta-code had outspoken contributors, whose body of knowledge extends considerably beyond the fixed paradigms of structuralism. In other words, narratology has borrowed many of its expounding aspects and principles from other literary theories, namely, psychoanalysis, formalism (that of Vladimir Propp's "codes of narration and folklore"), and even theories of deconstruction (Propp *et al.*, 1999, p. 32). Moreover, an overview of the field, such as Mieke Bal's influential *Narratology* (1997), breaks the science of narration down into the study of 'elements' and 'aspects', with the former being the actual events, actors, and places that make up the narrative, and the latter the ways that the text manipulates the presentation of those elements (p. 35).

CODES OF NARRATION: TITLING, ATTITUDINAL VOICE AND THE CONNECTION

Roland Barthes initially postulated five essential codes intended to address both the 'aspects' and 'elements' of narration, and to provide each

with a plausible definition. The first was his hermeneutic code known as 'HER.' This code seeks to resolve the most intriguing question that can be asked with regard to the title of a novel (as an unclear element in itself), or whether it is known to have possible connection with the voice in the narrative. In his *S/Z* (1974), Barthes propounds how HER can resolve the vagueness and ambivalence in the titles of literary works, and eventually its relevance to the voice of the narrative, by asking a number of questions. HER addresses "any element in a story that is not explained and, therefore, exists as an enigma for the reader, raising questions that demand explication" that should be resolved through the narrative (37).

With regard to Morrison's *Paradise*, HER can be utilised to investigate questions which originally refer back to the title, possibly one of the narrating voices of the novel,³ and to examine the actual reference from which both the main voice and the narrative are labelled. As for *Paradise*, the unclear connection/relation between the narratorial voices and the title begs a number of questions: (a) What is 'paradise'? (b) Is it feminine, or masculine? (c) Is it a verb or a noun? (d) Why even this name? and (d) Was the title originally intended to reveal anything about the voice or narrator?

With respect to HER, the answer to such secrecy would not be unravelled until the very end of the novel, which reveals something "extraordinaire" about the nature of the voice and narrator. It reveals the title to be a sexless noun with no specific gender; indicative of a religiously⁴, yet to a large extent stereotyped, restful place in which "lost" ships or souls might harbour for eternity:

...another ship perhaps, but different, heading to port, crew and passengers, lost and saved, atremble, for they have been disconsolate for time. Now they will rest before shouldering the endless work they were created to do down here in paradise. (Morrison, 1997, p. 318)

Moreover, it also can be inferred that the title, although ostensibly inanimate, resonates a certain attitudinal voice towards those who may come to 'rest' there; an attitude which has direction and a source of some sort. It is, however, difficult to perceive whether the voice is charged with malice or benevolence, considering the seemingly preordained narrative which is about to prevail; in other words, why should souls and ships harbour there? Have they been forced to do so by the omniscience of the voice, or is the 'rest' undertaken voluntarily?

In order to formulate an acceptable answer, one should consider Gérard Genette's "structuralistically" faithful codes of narration.⁵ Genette's suggestion on resolving the narrator's voice was that it should not be mixed with "perspective," or "the eyes we see through," but it should be sought for "when we analyse the relationship of narrator to the narrative, and the way the story is being told" (as cited in Tyson, 1999, p. 221). In other words, it would be the voice that "helps us determine the narrator's attitude towards the story and reliability"⁶ (p. 222). That being said, one wonders if the voice which speaks as a reverberating narrator at the end of the story should be considered "paradise"⁷ itself, in that it echoes a voice out of the unconscious of each character that may form a collective unconscious of the people in the novel?⁸ Or is the voice that of a metaphysical narrator who had ordained the plot beforehand, but who still requires additional information to be narrated through the mouthpiece of characters who are 'mentally and/or physically' involved, in order to reach a sound closure for the narrative?⁹

To further explore the voice and attitude, one should refer to the beginning of the novel, where the narrative has not begun; sounding like introductory musings of an unknown narratorial voice that begins by referring to a poem from the Nag Hammadi Library:

*For many are the pleasant forms which
exist in numerous sins,
and incontinencies,
and disgraceful passions,
and fleeting pleasures,*

*which (men) embrace until they
become sober
and go up to their resting place.
And they will find me there,
and they will live,
and they will not die again.
(Robinson, 1990, p. 356)*

Considering Genette's code of voice, the attitude maintained by the voice in the novel can be labelled 'comforting' and 'soothing,' as it warns both the readers and characters about the nature of their life, deeds, the eternal 'resting place,' and of course, the omniscient entity that 'they will find...there.' In this respect, the voice at the very end of the narrative itself becomes a protective being, watching over characters, and warning them of the actions about to take place; and when the "ocean weaves" of disconcertion and turbulence have settled, it will provide the "crew and passengers" with "solace" and "unambivalent bliss of going home" (Morrison, 1997, p. 318).

*"When the ocean weaves sending
rhythms of water ashore, Piedade
looks to see what has come. Another
ship, perhaps, but different, heading
to port, crew and passengers, lost and
saved, atremble, for they have been
disconsolate for some time. Now, they
will rest before shouldering the endless
work they were created to do down here
in paradise" (p. 318).*

'WRITERLY' NARRATIVES: VERSATILE AND MULTI-THREADED

The other major aspect of narration in Paradise is the style with which it is presented - the multiplicity of stories, implemented narratives, non-linear chronology, the labyrinth of mystified relationships among the characters, and a sound and conclusive closure with minimal exposure of the narrator's identity. The features which Barthes (1974) considers necessary for a text to be labelled "multi-level" are: (a) it starts

by foretelling the end in the beginning; (b) the multiplicity of entrances and exits for the narration and narrators; (c) non-linear chronology; and (d) a severely twisted plot. Barthes refers to such a text as the embodiment of a “writerly text”:

[A] writerly text is ourselves writing, before the infinite play of the world (the world as function) is traversed, intersected, stopped, plasticised by some singular system (Ideology, Genus, Criticism) which reduces the plurality of entrances, the opening of networks, the infinity of languages (p. 5).

This definition is in opposition to Peter Brooks’ (1984) hypothesis of a perceivably forward-moving text with a clear beginning, notable climax, and eventually a revealing ending, which Barthes terms a “readerly text.” Brooks argues that “all readers are naturally charged with a zeal or enthusiasm to have their hands on the final part of the story” in order to have the enigmas and mysteries which were raised in the beginning of the narrative resolved and cleared (p. 34). Brooks refers to this trusty, ongoing pace of the story as “temporal dynamics,” which is charged by a “motor force,” or a desire within readers to finish and end what they started (p. 120). Brooks elaborates on this desire as “the temporal dynamics that shape narratives in our reading of them, the play of desire in time that makes us turn pages and strive toward narrative ends” (p. 120).

Brooks’ application of codes for narration within texts seems quite outdated, and in a way stereotyped, as they are reminiscent of early Victorian novels and short stories; they offer everything in a ‘single package’, demanding the least possible mental exertion from the readers to go through and eventually digest the text. Brooks, however, looked for yet another aiding element in the art of narration, by which the narrative could be vivified to some extent: starting the novel in *medias res*, the progenitor of which is no less than Homer’s

Odyssey. Although beginning a narrative in *medias res* lends it, and the narration, a sense of chronological chaos, Brooks (1984) argues that it seemingly maintains a balance between the temporal progression of the story’s pace, and its element of suspense (pp. 45, 62).

With respect to *Paradise*, the reader sets himself up to witness a ‘writerly text’, a text which is garnished by: (a) a thoroughly non-linear storyline, (b) numerous ‘entrance/exit’ instances of both narrators and the narrative, and (c) a cautious main narratorial voice that guards its concealed identity, but which reveals an anticipated sense of reality, through the profusion of details in a descriptive narrative.¹⁰ It cannot be ignored that from the beginning of the novel—a terrifying one at that—it seems as if the main narrator has already formed a certain attitude, tending to disclose the secrets behind the Convent, the townspeople, and all the other characters to whom the murderous scene is related. This revelation will be achieved not only by what is about to be revealed by the main narrator as a ruling omnipresent judge, but also by means of excavation from the characters’ regressive minds.

For instance, the main narratorial voice—which happens to embody (the voice of) ‘Paradise,’ delves deep into memories of Anna at the time when she is four, and “sitting on the new porch of her father’s store—back in 1954” (Morrison 1997, p. 116). It is the same exact time period in which another ‘being’ begins to narrate in *medias res*, and reveals the untold narrative of Steward, Anna, Ace, Nathan DuPres and other characters. These characters will later be given significant roles in sculpting a proper closure to the narrative of Ruby’s townspeople, as well as that of the women of the Convent. This manifold of stories within stories introduces the narrative of *Paradise* as a metanarrative: the shorter stories might possibly complete a larger picture, perhaps in relation to where this promised land might be, based on various accounts.¹¹ Secondly, it introduces the narratorial voice as if shrouded behind masks of characterisation that deliberately evokes a strong message: the narratorial voice cannot provide

enough details to finalise the closure all by itself. In this way, the voice of 'Paradise' ushers in the inevitable introduction of certain characters, whose personal memories and interpretations will make the closure become more tangible, and thus more sensible.

The narrator's voice, which adheres to Genette's code of 'distance', sounds more akin to that of a patient detective, who is resolved to disclose hidden parts related to the offensive beginning of the novel, and the involved characters. This, in fact, shapes a disclosure which resounds with what Brooks (1984) states about the available 'temporal' agent in novels: that "all narrative posits [sound like they are uttered by] if not the Sovereign Judge, at least a Sherlock Holmes capable of going back over the ground, and thereby realising the meaning of the cipher left by a life" (p. 34). In a deeper study of the versatile voices within *Paradise*, not only may one be naturally attracted to seek for the main narrators' distinctive voice, and its relative attitude towards other townspeople, but it is also the townspeople's voice itself which stands distinct due to its different tonality. In other words, as far as the psychological aspect of Genette's code of voice is concerned, the secondary resonating voice would be the convergence of the townspeople's voice, which justifies the present murderous deeds as the result of a perturbed past memories; and thus, the attitude would be the mere reluctance of townspeople in socially welcoming the women of the Convent, and a gradual detachment from them.

CLOSURE/ENDING: PSYCHOLOGICAL ASPECT OF HUMAN NATURE

Brooks (1984) remarks on the presence of an innate desire which urges readers "to reach to an end" (p. 36), or in narratological terms, to reach complete closure. Yet, as far as the psychological aspect of closure is concerned, such an 'ending' can be thought of as the representation of a Freudian conclusive impulse, namely, the death drive. It is this innate impulse that tempts readers to find 'ends' and 'closures':

indispensable points through the process of reading and conceptualisation of the narrative.¹² This conclusive desire seems to be not only reader-relevant, but also author-relevant—through the mouthpiece of the narrator, and through characterisation.

In *Paradise*, characters are set to be on guard against the women of the Convent, which is complemented by their frequent verbal animosity. They seem to be eager and willing to put an end—in the way they finally do—to everything and everyone related to the Convent, as if following a determined 'conclusive unconscious.'¹³ Accordingly, such 'homeostatic'¹⁴ actions amplify how the Genettian code for 'voice' and attitude of the narrator(s) is threaded into the townspeople's voice: when this code and the apparent destructive nature of Ruby's townspeople (of course mostly aimed at the women in the Convent) are parallelised, then the narrated 'early and shocking' ending for the characters' lives becomes plausible enough.¹⁵

The 'homeostatic voice' is not limited to the men who commit the heinous act of murdering defenceless women in order to "eliminate or alleviate their mental tensions," but to their families and children as well (Hendrick, 1999, p. viii).¹⁶ The embittered narratorial voice in 'Paradise', that symbolises the townspeople, goes beyond the simple bitter words, the latter of which have long been used against the women at the Convent. In fact, the ill-disposed nature of the voice begins to shape the townspeople's behaviour into something completely asocial, and partially hostile. Take the townswomen of Ruby for instance; they seem to be already fed up with how women of the Convent behaved, and how they ruined a "nice and memorable wedding" with their obnoxious appearance (Morrison, 1997, pp. 156-8). As the narrative reveals, anything which refers to the women of the Convent seems to bother the townspeople in one way or another. Their behaviour and outfits, among other things, easily trigger a negative anxiety, leading towards an unconsciously defensive attitude. The narrator, however, seemingly cannot afford to possess either a supportive or philippic perspective towards

the women in the Convent while explaining the townspeople's attitude, for doing so would jeopardise its anonymity as an omnipresent judge. This neutrality of perspective also upholds the narrator's position as an "'aspect' which can question or elaborate the 'element' of narration" stays feasible (Mieke, 1997, p. 75).

INTROSPECTION AND 'DISTANCE': MAINTAINING MAXIMUM ANONYMITY

With regard to the Genettian code of 'distance,' the narrator acts quite professionally to maintain its distance and aloofness from the voice within the narrative¹⁷. This detachment is simply retained by instigating anonymity, i.e. by having no specific appearance in any sets of sentences, or even words, which may suggest a personalised projection of the narrator. More often than not, as to the merits of 'writerly texts,' readers are bound to 'read between the lines,' if additional information about the voice, or toward whom the narration might refer, is needed. On the contrary, in *Paradise*, the style is coloured with lavish descriptiveness, through which the narrative may reveal requisite details in a constant pace of narration. This is why the concept of 'reality'—considering the Genettian code of 'distance'—seems to be at its pinnacle by the abundance of details, while the narrator's distance is perpetually reserved. In fact, what enables the narratorial voice in *Paradise* to share such a plethora of descriptiveness is the deployment of an inclusive consciousness, shared amongst the characters of the narrative; in other words, utilising the introspective form of narration.

'Introspective narration', or the usage of a delicate form of personalised psychological narration, is the dominant method that enables the narratorial voice to maintain the total realism of the story, while protecting itself from breaking into corporeal exposure, and therefore infringing upon the code of distance.¹⁸ This form of narrative is set to search deeply into the characters' unconscious—the reservoir of repressed personal memories and experiences—and bring it to surface, in a fashion that is

seemingly voluntary. What remains significant, however, is that the whole unravelled truth in this form of narration resembles a 'personal musing'; it is unconsciously uttered to alleviate a character's potentially traumatic conscience, even though it may publicly tarnish that individual. The memories and/or experiences, which are deemed necessary for the narrative by the omniscient narrator, are mostly tunnelled through this sort of musing, akin to 'monologues with present tense' rather than past-tensed monologues.¹⁹

One major reason which substantiates the usage of these personal, psychological narratives as part of the whole narrative is that they are the characters' psychic involuntary responses to the vague social stimuli within the storyline. These stimuli are implemented by the main narratorial voice, and are thus required to complement the narrative, and clarify such vagueness. In other words, there are incidents occurring within a chapter of the novel that render the whole narration simply a vague and incomplete effort; therefore, it is required to have a fresh revelation of the same incident from a more personalised and involved perspective, which is achieved through introspective narration. Moreover, the indispensability of such a personalised, introspective narration, in achieving a constant and unbreakable story pace, can best be comprehended through what Barthes (1974) labels the 'Proairetic code' or 'ACT.'²⁰ ACT is when an action or event,

...refers to another major structuring principle that builds interest or suspense on the part of a reader or viewer. The Proairetic code applies to any action that implies a further narrative action. For example, a gunslinger draws his gun on an adversary and we wonder what the resolution of this action will be. We wait to see if he kills his opponent or is wounded himself. Suspense is thus created by action rather than by a reader's or viewer's wish to have mysteries explained. (p. 30)

There are myriad of instances when an action or event begs for such self-inspective and character-induced form of narration. As a result, introspective narration gradually illuminates further details about that specific individual; the cause that discloses why a repressed memory is related to the ongoing flow of events, and how other individuals respond to this narration. Take, for instance, an incident in *Paradise*, where regardless of its inadvertent occurrence, it brings about a whole new setting, and an indulgence in a character's unconscious to produce a more sensible narrative:

It was the lip swelling around its split that troubles her. With pressure it oozed a trickle of blood and suddenly everybody was running through the streets of Oakland...sirens, yes, and distant...The water trickles into the tub. Gigi put rollers in her hair.²¹ (Morrison, 1997, p. 170)

It is as though the Barthesian Proairetic code caused Gigi's (Grace) unconscious to force previous memories out into an analogy with a present state, and thereafter, to have them articulated through a continuous monologue with present tense. This externalisation of past memories through introspection and self-narrative may not find any better definition but to be considered as 'condensation' of unconscious images which allows a repressed memory to emerge. This particular memory tends to be avoided through the process of 'avoidance.' The introspective narration initially seems to be overwhelming and inclined to crisscross with present events and past memories. Yet, it gradually settles down to be an unconscious defence agent/mechanism which is set to sedate the traumatic mind of the narrator through self-narration.

CONCLUSION: PARADISE THE UNRELIABLE NARRATOR?

To sum up the aforementioned forms of narratives and narration as a whole, Toni

Morrison seems to imply in her *Paradise* that we, the readers, cannot afford to search for a singular, reliable omniscient narrator due to the complexity of the narratorial voice in the text. This complexity, which indicates unreliability, can be witnessed throughout the narrative and remain as something impeccably personal and wrapped in the labyrinth of individuals' unconscious psyches. The characters, therefore, become the next dominant narratorial voices, by way of exploring the narrative of *Paradise* from within themselves. This is when the other forms of narration, such as self-narrative, monologues, figurative, Barthesian, introspective, Genettian, etc., prove themselves to be more pragmatic than a particular omniscient narrator. It is likely, however, that such an omniscient narrator is formed as a sum of all narrators, namely, a collective consciousness which whispers the narrative to readers—out of the collective unconscious of all characters in that narrative. When the voice of 'Paradise' presents its resounding disagreement with the townspeople's ill-considered perception of "Furrow of the Brow," the disagreement is articulated through Dovey and Delia (Morrison, 1997, p. 93). In this way, the narratorial voice ('Paradise') maintains its anonymity and cements its position, in relation to the townspeople, as a detached, albeit watchful, voice. In view of this, 'Paradise' proves once again that its deficiency is not only caused by the complexity of the labyrinthine narrative, but also by the need to have proper closure. The latter is very significant for 'Paradise' that it hides behind a manifold of characters, and thus delves into their personal memories, and finally leads the narrative towards a proper closure using this unified body of information, in the form of scattered memories.

Considering the fact that the narrative of 'Paradise' largely depends on a manifold of personalised narration, it seems to be implied that such an omniscient narrator repeatedly falls short and stands merely incompetent in providing the narrative with substantial pieces of information that could 'lead the story somewhere,' and at least fulfil the Barthesian closure.²² Therefore, the voice too ought to be

considered as an implication of voices within the narrative forged into a unified and constant narrating tone.

ENDNOTES

¹See Irena P. Patton (2008).

²Philip Page in *Dangerous Freedom: Fusion and Fragmentation in Toni Morrison's Novels* (1996) provides a strong analysis of Morrison's six fictional works, and an equally thorough reading of the criticism and theory.

³Basically, the title in Morrison's seventh novel reveals nothing specific about the nature of voice; yet what only the title resonates would be a generalised religious theme.

⁴I use the term 'religiously' intentionally, in order to emphasise the orthodoxy that the title of the novel represents: a metaphysical promised land, features of which both the ending and the prologue-like poem have figuratively spoken; the former in the form of a concluding point, and the latter as a point where the narrative is expected to end.

⁵This distinctly refers to codes that correspond with the very paradigm of structuralism presented by Gérard Genette. See Lois Tyson (1999), pp. 221-2.

⁶Genette notes that the concerns of the voice upon the current or prospective events within a narrative should not be considered as an individualistic instance of narrator's mindset, namely, a possible interference with the stream of ongoing events. See Tyson (1999), pp. 221-2, especially the chapter "Structuralism and Narration."

⁷Here, 'Paradise' refers both to the place—the promised land where the women of Convent are implied to rest eternally, and the unified body of a narratorial voice.

⁸The realm of unconscious, as Freud noted, should be considered as a reservoir of maintained experiences, of either individuals or in a larger scale a sum of them, within which "religious doctrine(s) are apparently known to be illusions and projections of infantile needs that comfort people who may not be able to face sufferings, uncertainty and death." It also ought to be seen as an unknown realm through which metaphysical concepts and messages are mentally producible. The latter is quite discernible when it comes to a Jungian hypothesis of unconscious. See Paul C. Vitz (1988) 1-4.

⁹There are marginalised characters in the novel who tend, by the order of narration, to only be heard by other characters at a distance; there is also no specific

lead to the actual physical appearances of these characters, such as the original leaders of the people of Ruby, namely, the Zechariah, Rector Morgan and so forth. These characters, despite their notable role in the formation of the Ruby are perceived to have the least presence and interference in the story-line and concurrent events.

¹⁰There are instances in *Paradise* when the main narrator intentionally dedicates a whole chapter to a specific character—Patricia, Connie, etc.—and stops taking any particular part as the leading narrator. The introspective narration, which is led by the chosen character's traumatic and revelatory unconscious, guides the whole narrative towards a more descriptive cause for a proper closure of the novel.

¹¹Such an implementation of shorter stories within the main story occurs to be a recurring theme throughout the narrative of *Paradise*, as can be seen in pp. 94, 110, 116-17, 126-27, 170-71, 210.

¹²They are the same 'closing points' that define and conclude all previous efforts put forward by authors, through narrating the story in order to 'lead the narrative somewhere.' Also see Barthes (1974), p. 18.

¹³This 'general unconscious,' as Freud argued, should be considered as elemental representation of an innate phenomenon in both individualistic and global scale, which leads towards 'homeostasis'—fighting against tensions, negation, dissolution, and death. It had been in practice, either unintentionally or with fullest volition, in sensible instances such as civil wars, dictatorial World Wars and even in arbitrariness of social judgments towards each other; a leading desire to 'rule over' others and not to be ruled over. See Freud (1998), pp. 35, 77.

¹⁴See note 13.

¹⁵The novel starts by showing that "they," namely, the townspeople, "shoot the white girl first." And, "With the rest they can take their time" (*Paradise* 3). Within the earliest stage of the narrative, readers feel bedazzled by the blood-soaked scene, but at the same time they are still immune to the fact that these shot girls will be the major narrators of the next 318 pages to come.

¹⁶As the term 'homeostasis,' in fact, refers to such notion of alleviation and psychic balance attained through destruction or removal of other opposing elements, individuals, etc; it is also known as the 'ego potential.' See Ives Hendrick (1999), p. 96.

¹⁷Genette argues that "the more intrusive the narrator, the greater the distance between narration and story."

And conversely, "the least distance is created when we are unaware of the narrator's presence, when a tale seems to 'tell itself.'" He also notes that a more plausible distance can be achieved through the "absence of descriptive detail." In other words, "the less detail given, the less the effect of reality is created, and the greater the sense of distance between narration and story." See Genette (1983), pp. 120, 192-3. Also see Tyson (1999), pp. 220-2.

¹⁸See Dorrit Cohn (1978), p. 203.

¹⁹It is as if the whole set of revealed past memories/experiences are being re-generated, however, through a present mouthpiece; but they are being reviewed in that individual's mind, ipso facto.

²⁰See Barthes (1974), p. 30.

²¹"With pressure it oozed a trickle of blood" is an instance of Barthesian Proairetic code (ACT). The entire excerpt is the most conspicuous instance of introspective narration in the narrative of Paradise.

²²See note 12.

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A Validation Study of the Persian Version of McKenzie's Multiple Intelligences Inventory to Measure Profiles of Pre-University Students

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ABSTRACT

Traditionally, intelligence was viewed as a single static entity. Revolutionizing the once-dominated "single-static entity" conceptualization, Gardner initially (1983) proposed his theory of Multiple intelligences (MI) that encompasses seven different areas of intelligence (verbal-linguistic, logical-mathematical, musical-rhythmic, visual-spatial, bodily-kinesthetic, interpersonal, and intrapersonal), and later on added the eighth and ninth areas (naturalist and existential) in 1999. Based on the theory of Multiple Intelligences (MI), a person may be viewed as intelligent in any of these areas, and the identification of the dominant intelligence type has proven to have pedagogic implications. McKenzie's MI questionnaire (1999) is one of the established tools to identify the typology of intelligence. The present study aims to validate the Persian version of the MI Inventory (questionnaire) proposed by McKenzie (1999). This instrument provides an objective measure of MI. This paper describes the validation exercise of the abovementioned questionnaire that involved 173 pre-university students of both genders in Tehran. In addition, the variables gender and discipline were also considered in this study. The findings of the study indicate that overall, the Persian version of the questionnaire has a high reliability. In addition, the results show a moderate to high relationship between gender and MI profiles of the students.

Keywords: Multiple-intelligence theory, McKenzie's MI Inventory, pre-university students

INTRODUCTION

Preparing students to deal with the workplace culture, a foreign culture, or the mainstream culture, which may be different from their own, is one of the main responsibilities of educational institutions. Therefore, schools usually tend to assess students based on the same criteria that the society in which it is situated does. A culture which puts maximal value on the verbal-linguistic and logical-mathematical intelligences will result in a focus on these abilities in schools. Armstrong (2003) states that our culture is dominated by linguistic intelligence and most

educators would agree that verbal-linguistic intelligence dominates the teaching-learning environment in our classrooms. Such a limited view of intelligence has alienated numerous students (Armstrong, 2003; Levine, 2003; Ruggieri, 2002), and society cannot afford to continue with this line of thought (Cetron and Cetron, 2004; Eisner, 2004). Similarly, Pearson and Stephens (1994) acknowledge that the information taught and tested in schools has been based on one type of knowledge, while ignoring "other kinds of knowing" (p. 39). They also remind readers that we "have contrived a way of

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‘doing school’ that bears little resemblance to the real learning and teaching that motivate human societies to create schools in the first place” (p. 39). Meanwhile, Eisner (2004) claims that the “primary aim of education is not to enable students to do well in school, but to help them do well in the lives they lead outside of school. We ought to focus on what students do when they can choose their own activities” (p. 10).

The failure of a single general intelligence (g factor) to explain human performance has led many psychologists and educators to believe that individuals, with their specific strengths and weaknesses, can be conceptualized as having multiple abilities (Chan, 2006; Karolyi, Ramos-Ford and Gardner, 2003; Sternberg, 1986: 1997: 2000).

Gardner (1983) disagrees with previous models of intelligence because they focused too much on logic and language and ignored other abilities. Gardner defines intelligence as the ability of a person to respond to new events and situations successfully and his or her capacity to learn from past experience (1983, p.21). He propounded the theory of MI and identified seven intelligences which he claimed were distinct. These are relatively autonomous human intelligences or ways through which people learn. The seven intelligences Gardner put forth in 1983 are verbal/linguistic, musical/rhythmical, logical/mathematical, spatial/visual, bodily/kinesthetic, interpersonal, and intrapersonal. In 1995, the eighth intelligence, i.e. Naturalistic intelligence, was added. Existential intelligence, which is the ninth intelligence, is still under consideration as it is yet to fully satisfy empirical and neurological evidence needed to include it on the list of intelligences (Gardner, 1999; Viens and Kallenbach, 2004).

Thus, to fulfil the educational goals of students, some points which are taken from Gardner (2004) should be mentioned, and these include: 1) individuals use different strategies to process information and solve problems depending on the type and level of their intelligence abilities, and 2) in order to provide suitable learning experiences for students, teachers need to assess the students’

talents carefully and properly, and then guide them to utilize the maximum capacity of their intelligence and talent in the direction of the educational goals.

In order to reach the above mentioned goals, the assessment of the students’ MI profile is therefore required. According to Lazear (1991:1992), the students’ needs, intelligence models, and learning strategies should be considered on the basis of the MI theory and the emphasis should not be strictly on the verbal-lingual and mathematical-logical intelligences alone. On the contrary, Lazear (1991:1992) claims that such an emphasis is unfair due to students’ individual and group differences in Gardner’s different models of multiple intelligences.

MULTIPLE INTELLIGENCES AND LANGUAGE LEARNING

The area of MI and English language learning of students have received attention from researchers. Since this study has focused on one of the tools used to identify the multiple-intelligence profiles of students, that is, McKenzie’s (1999) MI Inventory, the studies that used this questionnaire would also be reviewed. Some of the researchers have used this questionnaire as they have found it an applicable and useful tool to measure the multiple-intelligence profiles of the students (*see* for e.g., Al-Balhan, 2006; Marefat, 2007; Mokhtar *et al.*, 2008; Pasha Sharifi, 2008; Razmjoo, 2008; Razmjoo *et al.*, 2009; Sung, 2004).

Sung (2004) used instructional strategies based on the MI theory to improve the teaching and learning of Korean among foreign language learners, and to help equip the Korean language teachers in broadening their pedagogical repertoire so that they could accommodate linguistically, culturally, and cognitively diverse students. This study used McKenzie 1999’s MI Inventory to measure the multiple-intelligence profiles of the participants, as well as to practice applying MI theory to Korean teaching in the classroom setting for Korean language instructors.

Investigating whether or not there is any relationship between students' multiple-intelligence profiles and their writing products, Marefat (2007) conducted a research study in which she collected data from 72 male and female EFL Iranian undergraduate students (aged 19-27 years) who studied English literature and translation. The data were collected through the students' average scores on three essays and McKenzie's MI Inventory. She found that kinesthetic, existential, and interpersonal intelligences made the greatest contributions in predicting the writing scores of the students.

Meanwhile, a study carried out by Razmjoo *et al.* (2009) was aimed at identifying the relationship between multiple intelligences, vocabulary learning knowledge, and vocabulary learning strategies among EFL Iranian learners. The subjects of the study were 100 senior students who were studying English Language Teaching at Shiraz Azad University between 2006 and 2007. The data analysis of the findings revealed that there was a relationship between multiple intelligences and vocabulary learning knowledge. It was also found that among the different domains of intelligence, the linguistic and natural intelligences made statistically significant contributions to the prediction of vocabulary learning knowledge.

In order to determine the relationship between multiple intelligences and language proficiency, another study was carried out by Razmjoo (2008) to investigate the relationship between multiple intelligences and language proficiency of Iranian PhD candidates, and to explore whether one of the intelligence types or a combination of the intelligences are predictors of language proficiency, and to examine the effect of gender on language proficiency and the types of intelligences. The subjects of the study were 278 male and female PhD candidates at Shiraz University. The data revealed that there was no significant relationship between language proficiency and the combination of intelligences in general and the types of intelligence in particular. Similarly, it was found that there was no significant difference between the male and female students and between multiple

intelligences and language proficiency in the Iranian context.

Mokhtar *et al.* (2008) conducted a research study entitled, "Teaching information literacy through learning styles: The application of Gardner's multiple intelligences". They believe that making the students independent learners and knowledge workers of tomorrow lies in being information literate (IL). Therefore, they hypothesized that the students' innate interests are stimulated when they grasp IL skills more effectively and apply them to their work. Accordingly, the quality of the work produced would be better. For this purpose, the researchers designed an IL course to prepare the students with the necessary IL skills and divided them into experimental and control groups. Later, the quality of the project work of the experimental group who received IL course training was compared to that of the control group. It was found that the students who had received IL training (experimental group) had better performance in their project work as compared to those who had not received such training (control group).

In a research study conducted among middle-school Kuwaiti children, Al-Balhan (2006) investigated the effectiveness of students' multiple intelligence styles in predicting the improvement of their reading skills through academic performance of both genders and from grades one to four. They had received their first quarter grades and enrolled in an after-school tutoring programme. The students were divided into an experimental group who received training on the basis of Gardner's multiple intelligences and a control group who was subject to a traditional tutoring programme. The data revealed that the students in the experimental group performed better than the students in the control group. It was also found that the female students in the experimental group did significantly better than the males.

In his paper entitled, "The introductory study of Gardner's multiple intelligence theory in the field of lesson subjects and the students' compatibility", Pasha Sharifi (2008) describes the questionnaires and tools used for assessing

various types of intelligence in education processes. Among them, he highlighted the multiple intelligence tests for children by Nancy Fairs, multiple intelligence questionnaire by Harms and Douglas, and the multiple intelligences which were compiled by McKenzie in 1999. The study was conducted with a group of 120 secondary school students in different branches. It was found that there was a low to moderate, but significant correlation among different kinds of intelligence and related school subject scores. Additionally, it was found that the female students in the study were superior in intrapersonal intelligence, while the male were superior in visual-spatial intelligence. However, no significant difference was found between them in relation to other kinds of intelligences.

The studies discussed here have focused on multiple intelligences and classroom applications. To the researchers' knowledge, no study has been done to produce a reliable and valid Persian version of the McKenzie Inventory for a typical Iranian pre-university classroom.

AIM OF THE STUDY

The aim of this study was to examine the reliability and validity of the Persian version of McKenzie's (1999) MI Inventory in measuring the multiple intelligences of Iranian Pre-University students. Additionally, the study also attempted to find out if there are statistically significant differences between genders and branches of study of the students and their multiple intelligences.

METHODOLOGY

In this section, the subjects, instruments used to collect data and the procedures adopted are discussed.

Subjects

The subjects for this study were 176 pre-university students (grade12, 18 years old) of both genders studying in Tehran in the academic year 2008-2009. The district was randomly

chosen from among 19 school districts in Tehran. Similarly, the students were also randomly selected from two different segregated high schools in that particular region. Random sampling was used to create homogeneous groups without involving any potential biases or judgments.

Instrument

In order to identify the intelligence profile of the participants, the MI questionnaire was distributed to the students. Armstrong (1994) states that the MI Inventory is a form that was designed to assess the strengths of the individual as determined by each of the intelligences. In this study, McKenzie's (1999) MI inventory was used. Some researchers have claimed the overall internal consistency in the range of 0.85 and 0.90 for the questionnaire (Al-Balhan, 2006; Razmjoo, 2008; Razmjoo *et al.*, 2009). It comprises 90 statements related to each of the nine intelligences proposed by Gardner (1999). In the study each respondent was required to complete the questionnaire (*see* Appendix A) by marking *yes/no* next to each statement. If the statement accurately described them, they would then mark the *yes* option. However, if the statement did not describe them, their answer should be *no*.

Procedure

The original English version was translated into Persian by the researcher to ensure that the individuals could easily understand the items as well as to avoid any difficulty related to their (lack of) foreign language proficiency. The back-translation procedure was carried out to ascertain that the translated version had the same interpretation. However, some of the contents had to be altered without losing their original intent to fit the local context. The accuracy of the Persian version was then checked by two Iranian independent professional translators of ESL. Later on, the translated version of the MI inventory was checked and revised by two experts in the field of education. Finally, the

researcher asked two psychologists to check the translated version to ensure that it is suitable for students at that age (18 years) according to the difficulty of the words or sentences, and that it is culturally suitable for the Iranian society. Cronbach's alpha for this translated version with a sample of 173 and by the use of SPSS version 16 was found to be 0.90, indicating a high reliability of the test.

RESULTS AND DISCUSSION

The subjects of the study were initially 176 students, out of which three did not complete the questionnaire. Therefore, the total number of respondents was 173, with 78 males and 95 females, respectively (*see* Table 1). The respondents' disciplines of study are summarized in Table 2.

TABLE 1
Number of students by gender

	Frequency	Percentage
Male	78	45.1
Female	95	54.9
Total	173	100.0

TABLE 2
Number of students by discipline

	Frequency	Percentage
Mathematics	55	31.8
Experimental Science	19	11.0
Humanities	99	57.2
Total	173	100.0

Table 3 summarizes the descriptive statistics for the MI subscales of the students. Based on the data, the entire group is strong in terms of their interpersonal intelligence (M=24.83) as perceived by them. However, intrapersonal intelligence was scored the lowest by the students (M=17.16). These findings contradict with those found by Marefat (2007), who reported the highest score for intrapersonal intelligence

and the lowest score for the interpersonal intelligence. Nonetheless, the findings of this study support those found by Currie (2003) in an ESL reading class.

TABLE 3
Descriptive statistics of MI subscales in descending order

	N	Mean	Std. deviation
Interpersonal	173	24.83	5.72
Verbal	173	23.86	5.83
Logical	173	21.34	5.30
Naturalist	173	20.29	5.07
Visual	170	19.61	5.38
Kinesthetic	173	19.56	5.17
Existential	173	19.32	5.23
Musical	173	19.01	5.21
Intrapersonal	173	17.16	4.93

In order to check for the internal consistency of the questionnaire, Cronbach's alpha for the Persian version of the questionnaire and also for each of the intelligence subscales were calculated. The overall reliability coefficient for the above-mentioned questionnaire was found to be $r = 0.90$ (*see* Table 4). This indicates the large magnitude of reliability coefficient (r) for the translated version as well as the homogeneity of the items within the scales. This reliability is considered as "very good", based on the guidelines provided by George and Mallery (2002). Among the intelligences, intrapersonal intelligence has the highest coefficient alpha (0.75), and logical intelligence demonstrates the lowest coefficient alpha (0.60), as presented in Table 5.

TABLE 4
Cronbach's alpha for the Persian version of McKenzie's MI Inventory

Cronbach's alpha	No of items
0.90	90

TABLE 5
Cronbach's alpha for each subscale of intelligences

Intelligence	Cronbach's alpha =
Intrapersonal	0.75
Existential	0.70
Naturalistic	0.66
Visual	0.66
Musical	0.65
Verbal	0.64
Interpersonal	0.62
Kinesthetic	0.61
Logical	0.60

In order to have further assurance of the reliability of the instrument, the Split-Half reliability coefficient was also run on the data. Cronbach's alpha for the first part was found to be 0.82 and for the second part, 0.85. Similarly, the Spearman-Brown Coefficient was also found to be 0.82 (see Table 6).

TABLE 6
Split-Half Reliability Coefficient

Cronbach's alpha	Part	Value	
	1		.823
		N of Items	45 ^a
	2		.847
		N of Items	45 ^b
	Total N of Items		90
Correlation Between Forms			.691
Spearman-Brown Coefficient	Equal Length		.817
	Unequal Length		.817
Guttman Split-Half Coefficient			.815

The next step was to find out whether there was a significant relationship between gender and the MI profiles of the students. Cronbach's alpha for the female and male students was found to be 0.89 and 0.91, respectively, revealing that there was a moderate to high relationship for

both the males and females (see Table 7) in relation to their MI profiles.

TABLE 7
Reliability by gender

Gender	Cronbach's alpha	N of Items
Female	0.89	90
Male	0.91	90

Meanwhile, to investigate patterns of intelligence in terms of the extent of dominance (strength/weakness) between genders, the same procedure was done for each subscale. It was found that the male students in the study were stronger in their intrapersonal intelligence (0.80) but weaker in logical intelligence (0.58), while the females showed their strength in existential intelligence (0.72), but were weaker in terms of kinesthetic intelligence (0.54) (see Table 8). The findings of the present study seem to contradict those of Teele (1995) and Bouton (1997), who observed that interpersonal, kinesthetic, and that spatial intelligences predominate in both male and female participants of their study. The findings in the present study also contradict with those which did not find any significant difference in the multiple-intelligence profiles of the male and female respondents (Pish Ghadam and Moafian, 2008; Razmjoo, 2008). In his study, Pasha Sharifi (2008) found that the female subjects were superior in intrapersonal intelligence while the males in visual-spatial intelligence. However, similar results were not found in the findings of the present study. Hence, further research is needed to clarify the relationship between gender and MI profiles of the Iranian pre-university students.

TABLE 8
Reliability of MI subscales by gender

Intelligence	Cronbach's alpha	
	Male	Female
Naturalist	0.65	0.67
Musical	0.60	0.65

Logical	0.58	0.59
Existential	0.68	0.72
Interpersonal	0.67	0.54
Kinesthetic	0.67	0.54
Verbal	0.64	0.64
Intrapersonal	0.80	0.66
Visual	0.70	0.63

The present study also attempted to find out the probable relationship between multiple intelligences and students' disciplines. Since the students were from three different disciplines (namely Experimental Science, Mathematics, and Humanities) and as the study did not have access to the female students studying in Experimental science, it was decided not to consider their male counterparts in this part of data analysis. Thus, the analysis was done among those studying Mathematics and Humanities only. In the first phase, Cronbach's alpha for the students studying Mathematics and Humanities was calculated to find out the probable relationship between their multiple intelligence profiles and the disciplines they were enrolled in. Cronbach's alpha for the students studying Mathematics was found to be 0.88, and for the Humanities 0.91, demonstrating a moderate to high relationship between students' multiple-intelligence profiles and the disciplines they were enrolled in (see Table 9).

TABLE 9
Reliability by discipline

Discipline of study	Cronbach's alpha	No. of items
Mathematics	0.88	90
Humanities	0.91	90

In the next phase, the subscales of the MI inventory for the students in above-mentioned branches of study were calculated. Among those studying Mathematics, intrapersonal intelligence was shown to be stronger (0.71), and the weakest value was indicated for kinesthetic

intelligence (0.46) (see Table 10). It seems quite logical for those studying Mathematics to have a higher combined value of logical-mathematical intelligence, as reported by Hashemi and Bahrami (2006).

TABLE 10
Intelligence subscales and mathematics

Cronbach's alpha	
Intelligence	Mathematics
Intrapersonal	0.71
Existential	0.69
Visual	0.67
Verbal	0.66
Logical	0.65
Naturalist	0.64
Musical	0.54
Interpersonal	0.53
Kinesthetic	0.46

The calculation of the Cronbach's alpha for the students studying Humanities revealed that the intrapersonal intelligence registered the highest value (0.76) as compared to logical intelligence (0.55) with the lowest value (see Table 11).

TABLE 11
Intelligence subscales and humanities

Cronbach's alpha	
Intelligence	Humanities
Intrapersonal	0.76
Existential	0.73
Musical	0.72
Visual	0.66
Naturalist	0.64
Interpersonal	0.63
Verbal	0.59
Kinesthetic	0.59
Logical	0.55

Therefore, the findings of the present study are consistent with the study of Hashemi and Bahrami (2006) who also reported that the students studying Mathematics scored higher in logical-mathematical intelligence as compared to those studying Arts and Humanities. Additionally, they also found that students studying Mathematics had higher verbal-linguistic intelligence than the other groups. Their findings are rather similar to those found in this study, as the Cronbach's alpha for the Mathematics students was 0.66 while those enrolled on courses in the Humanities was 0.59. In general, the relationship between some of the components of the students' multiple intelligence profiles and their academic discipline could be seen.

CONCLUSIONS

This study set out with the aim of assessing the reliability and validity of the Persian version of McKenzie's (1999) MI inventory with Iranian pre-university students. The findings indicate that the questionnaire has a high reliability (0.90). Meanwhile, the component of intrapersonal intelligence was found to have the highest coefficient alpha (0.75), and the lowest (0.60) was observed for logical intelligence.

In addition, the study also compared the gender of the individuals. The data of the study revealed a moderate to high relationship between genders and multiple intelligence profiles of the students. The findings indicated that the male respondents were stronger in their intrapersonal intelligence but weaker in logical intelligence, whereas the females were stronger in existential intelligence but weaker in kinesthetic intelligence. A comparison of their branches of studies and multiple intelligence profiles revealed a moderate to high relationship as well.

The important point that should be noted is that Gardner's theory has attracted the interest of many teachers and educational curriculum planners. Therefore, to improve the learning process, identifying the learners' multiple intelligence profiles seems crucial.

Questionnaires or inventories to measure learners' multiple intelligences are not too many; therefore, the most useful tools for such a purpose should be investigated so that they are accessible and readily available to measure the individuals' strengths and weaknesses.

In the present study, the findings should be treated with caution. Further research with other learners from different levels of education and more diverse disciplines would confirm the findings and add to the existing data. Moreover, it would be interesting to conduct a similar study with learners from other L1 backgrounds to find out whether similar results would be obtained.

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Appendix A

The Persian Version of McKenzie's MI Inventory

دانش آموزان عزیز جملات و عبارات زیر را با دقت مطالعه و گزینه هایی که بیشتر به نظر شما نزدیک است را انتخاب نموده و علامت بزنید. چنانچه منظور عبارتی را متوجه نشدید، آنرا بدون جواب بگذارید. مدت زمان لازم برای پاسخ به این پرسشنامه 30 دقیقه می باشد.

بلی	خیر

قسمت اول

- 1) از دسته بندی کردن اشیاء بر اساس ویژگی های مشترکشان لذت می برم.
- 2) موضوعات مربوط به اکولوژیک (بطور مثال چرخه ی حیات حیوانات) برایم اهمیت دارد.
- 3) طبقه بندی اشیاء کمک میکند تا اطلاعات جدید را بهتر درک کنم .
- 4) از کار کردن در باغچه یا پرورش و نگهداری گلها لذت می برم .
- 5) معتقدم حفاظت از پارک های ملی مهم هستند .
- 6) نظم و ترتیب دادن به هر چیزی برایم مهم و معنی دار می باشد .
- 7) در زندگی، حیوانات برایم اهمیت دارند.
- 8) در خانه سعی می کنیم جهت کمک به سیستم بازیافت، زباله ی کمتری تولید کنیم .
- 9) از مطالعه ی زیست شناسی، گیاه شناسی و جانور شناسی لذت می برم .
- 10) می توانم تفاوتهای ظریفی که در اشیاء وجود دارد را حس کنم .

بلی	خیر

قسمت دوم

- 11) به سادگی ریتم های موسیقی را یاد میگیرم
- 12) به صدا ها و آوایی که می شنوم دقت می کنم .
- 13) دوست دارم با آهنگ های مختلف حرکات موزون انجام دهم.
- 14) از آواز خواندن یا نواختن آلات موسیقی لذت می برم .
- 15) وزن شعری را دوست دارم.
- 16) وزن شعر ی یادآوری ام را آسان می سازد.
- 17) در جاهایی که مهممه وجود دارد نمی توانم تمرکز کنم.
- 18) گوش دادن به صداها ی طبیعت می تواند خیلی آرامش بخش باشد.
- 19) کنسرت ها و اجراهای موسیقی برایم جالبتر از نمایش (تئاتر) هستند.
- 20) به آسانی میتوانم اشعار آهنگین را به خاطر بیاورم.

بلی	خیر

قسمت سوم

- 21) همه مرا به عنوان فردی مرتب می شناسند.
- 22) راهنما ئی های گام به گام در زندگی نقش عمده ای دارند.

خیر	بلی

(23) دستیابی به راه حل مشکلات برایم آسان است.

(24) از دست انسان های شلخته زود کلافه می شوم.

(25) محاسبات ریاضی را به صورت ذهنی خیلی سریع می توانم انجام دهم .

(26) جورچین های فکری سرگرم کننده هستند.

(27) تا زمانی که مطمئن نباشم همه چیز به خوبی اجرا می شود، نمیتوانم کاری را شروع کنم .

(28) نظم چیز خوبی است .

(29) از پیدا کردن عیب و ایراد وسایلی که درست کار نمی کنند لذت می برم .

(30) از چیزهایی که مبهم و بی معنی باشند ناراحت میشوم.

خیر	بلی

قسمت چهارم

(31) نقشی که در نظام هستی ایفا میکنم برایم اهمیت دارد.

(32) از سوال و بحث کردن در خصوص مفهوم زندگی لذت می برم .

(33) اعتقادات دینی برایم اهمیت دارد.

(34) از دیدن آثار هنری لذت می برم .

(35) یوگا و مدیتیشن برایم لذت بخش است .

(36) مسافرت به مکان هایی که نگرش و نگاه به زندگی را در من تقویت می کند را بیشتر دوست دارم .

(37) مطالعه در مورد فلاسفه برایم لذت بخش است .

(38) دیدن کاربرد هر چیز جدیدی در دنیای واقعی ، یادگیری ام را آسانتر می کند .

(39) وجود شکل های احتمالی دیگری از حیات هوشمند در عالم برایم جالب است.

(40) نحوه ی برقراری ارتباط با مردم ، دیدگاهها و باورهایشان برایم اهمیت دارد.

خیر	بلی

قسمت پنجم

(41) در تعامل با دیگران ، بهتر یاد می گیرم .

(42) از بحث های ساده و جدی لذت می برم .

(43) دوست بیشتر ، زندگی بهتر .

(44) معمولا در میان همسن و سالانم ، نقش هدایت آنان را به عهده می گیرم.

(45) به خود روابط بیشتر از نتیجه ی آن اهمیت می دهم.

(46) درس خواندن گروهی یادگیری موثرتری برایم دارد.

(47) عضو یک تیم می باشم .

(48) روابط با دوستانم برایم اهمیت دارد.

خیر	بلی

72) مشارکت در اموری که به دیگران کمک میکند را دوست دارم.

73) خیلی مراقب باورهای اخلاقی ام هستم.

74) چیزهایی که دوست دارم را بهتر یاد میگیرم .

75) رعایت انصاف برایم حائز اهمیت است.

76) مسائل مربوط به عدالت اجتماعی توجه مرا جلب میکنند.

77) کار کردن به تنهایی می تواند به اندازه ی کار گروهی مفید باشد.

78) قبل از موافقت در انجام کاری ، دانستن علت انجام آن برایم مهم است.

79) اگر به چیزی باور داشته باشم برایش تلاش بیشتری می کنم.

80) برای اصلاح نارسائی ها و حل مشکلات ، مشتاقانه اعتراض خود را بیان و بر آن اصرار می ورزم.

خیر	بلی

قسمت نهم

81) می توانم ایده هایم را در ذهنم مجسم کنم.

82) تغییر دکوراسیون، چیدمان و آرایش محیط زندگی ام برایم سرگرم کننده می باشد.

83) از آثار هنری که خودم آن را می سازم لذت می برم.

84) با تجسم ذهنی ، مطالب را بهتر به یاد می آورم.

85) از تمام شیوه های سرگرم کننده (مثل کتاب ، تلویزیون ، رادیو، بازیهای کامپیوتری) لذت می برم.

86) نمودارها، منحنی ها و جدول ها در تفسیر اطلاعات به من کمک میکنند.

87) موسیقی توأم با تصویر بیشتر توجه ام را به خود جلب میکند.

88) اشیاء را با تصاویر ذهنی آن به یاد می آورم.

89) در نقشه خوانی (جهت یابی ، پیدا کردن مسیر و) مهارت دارم.

90) معماهای سه بعدی برایم سرگرم کننده می باشند.



Sociological Theories of Race and Ethnicity: Contesting, Substituting or Complementing?

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ABSTRACT

Issues, related to race and ethnicity, have always attracted attention from many. Throughout the development of sociology, many theories have been developed to explain these phenomena. Most of the time, however, the theories are read as contesting each other. Similarly, argument was laid out as though the theories are contesting to explain the truth of race and ethnicity. Readers have also contributed to the contest. In fact, it is the readers who, most of the time, categorize the theories they read into school of thought and consequently the theories are contesting at least from the readers' perspective. The theories are also seen as trying to substitute each other, either from the theoreticians' point of view or from the readers' point of view. Maybe it is through these contests and the urge to substitute, more and more theories are constructed to explain race and ethnicity. However, instead of contesting and substituting, the theories should also be read as complementing. Sociology is a field that enables society to be understood. Theories related to race and ethnicity should be stitched together to provide the big picture which ultimately leads readers to understand race and ethnicity phenomena. Therefore, this paper focuses on the thoughts of three social analysts, viz., Banton, Geertz and Eriksen. Their contributions to the understanding of race and ethnicity are immense and have never failed to generate discussions and development relating to these areas. By studying and laying out their ideas in complimenting nature, the big picture of what is race and ethnicity could be developed. The big picture is vital and will give significant input to the understanding of issues related to race and ethnicity, particularly in the plural societies such as Malaysia.

Keywords: Race, ethnicity, ethnic relation, complimentary approach

INTRODUCTION

Race and ethnicity are two relatively new concepts which have drawn the attentions of many sociologists who are interested in how people of differing background live and interact with each other. Issues and problems generated by the intergroup interaction have allowed sociologists to study and later try to make sense

of human diversity and unity. However, while the process of making sense has answered many questions, it has also caused opposing thoughts which consequently may affect the understanding of human societies.

Throughout the development of Sociology, many theories concerning race and ethnicity have been developed. In the 19th century, for

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instance, there were two important schools of thought. Among other, the racial typology theories championed by scholars such as Robert Knox, and this was followed by the Darwin's evolution theories which dominated the 19th century discussion on race (Banton, 1977, p. 5). In the 20th century, theories related to how race and ethnicity were actively constructed were in the limelight, in which Robert E. Park claimed that race is a product of European expansion (Banton, 1977, p. 8).

However, these theories have been read as contesting and substituting one another rather than complementing. One tries to replace the other by claiming that their theories provide a better explanation and therefore can give a better solution to racial and ethnic issues. These efforts of substituting are always associated with the sociological paradigm the sociologists are usually attached to.

Unfortunately, substitution may also be interpreted as competition. When one tries to substitute the other, sparks of conflict may appear and these will ultimately cause the ideals of C. Wright Mills' (1959) sociological imagination to be missed. Sociology should be a field which enables the understanding of society inside out. C. Wright Mills pointed out:

The sociological imagination should enable its possessor to understand the larger historical scene in terms of its meaning for the inner life and the external career of a variety of individuals... (Mills, 1959, p.11).

However, substitution and competition will break the field into fragments. When the field is fragmented, visions will be blurred.

Therefore, it is important for us to view the theories as not substituting but more on complementing each other. Anthony Giddens (1984) attempted to integrate structure and action theories. Giddens views structure and action as inseparable. The structure of a society cannot exist without action. Similarly, there will be no social action without the social structure laying down the foundation of action to occur.

His *structuration* effort should be seen as an effort to produce an integrated sociological approach of understanding society, which is of course a plausible effort. Sociological theories are, in many ways, complementing each other to provide the overall picture. Thus, the development of new theories is not to replace, but to provide additional explanation or explain areas which are not covered by the previous theories.

Sociological theories which explain the phenomena of race and ethnicity should then be read as complementing. In order to untie the knots which are causing difficulties in understanding the phenomenon, multiple approaches should therefore be employed. Hence, the theories are complementing. Newer theories could then be developed to explain a phenomenon which is unique in its own sense and to lead to a greater pool of theories to understand racial and ethnic phenomena. The larger the pool, the more comprehensive the understanding will be.

With such an understanding, i.e. theories are complementing each other, this paper intends to lay out theories of Michael Banton, Clifford Geertz and Thomas Hyland Eriksen using the complimentary approach, which is to see how compatible or consistent their theories are. These scholars have contributed immensely towards the development of race and ethnicity sociological theories, particularly in the mid and end of the 20th century. Banton is perhaps best known for his book "Race Relations" (1967). As a professor of Sociology, Banton's writings and thoughts introduced new concepts such as racialization and rational choice theory. Similarly, Geertz, through his book, "The Interpretation of Culture" (1973), introduced the notion that culture is actually an inherited system of symbols. Eriksen is an Oslo based anthropologist who has introduced discussion on the construction of ethnicity through his books, "Ethnicity and Nationalism" (1993) and "Ethnicity and Nationalism: Anthropological Perspective" (2002). Their thoughts and ideas related to this area have been studied and widely accepted as contributing to a greater

understanding of race and ethnicity. Through this complimentary approach, a comprehensive picture of racial and ethnic phenomenon will erase theoretical borders which have fragmented the theories. A more comprehensive picture will definitely look nicer than a fragmented one.

Banton's idea of race is the first to be discussed. His idea about race, which has historical as well as contemporary definition of race, provides a clearer interpretation of what race and ethnicity are all about. While providing the historical as well as contemporary understanding of what race is, Banton's view also leads to the view that race is socially constructed, either by individual action or structurally defined by power.

Banton's discussion is followed by a discussion on Geertz's Primordial Ties which describe why ethnic groups are formed. The primordial attachment establishes ethnic groups through kinship or some other factors which develop the sense of belonging ties individual to ethnic grouping. Geertz's Primordial Ties give a clear explanation of how ethnic groups are naturally a social construct of relationships. In other words, there is an active participation of both structural and action forces in the construction of ethnic groups. However, ethnic identity is meaningless if it is not recognized. In order to evaluate how "others" are playing role in constructing ethnic identity, Eriksen's view on the creation of ethnic identity is laid out as a follow up to the discussion and explanation of Banton and Geertz. In the final part of this writing, an analysis of how the views of Banton, Geertz and Eriksen can be stitched together is done to provide a bigger picture of race and ethnicity. These theories are discussed by referring to Malaysian experiences as the empirical evidences. This is because the formation of Malaysian as a plural society falls within the time frame which the three theoreticians worked on.

MICHAEL BANTON'S IDEA OF RACE

While reviewing the meanings of race and ethnicity, one may start to wonder what actually they are. Are they the same or are they different? Both terms have been used in a rather indifferent manner.

Historically, Banton described how race came into use. Before the term was coined to identify people according to their physical attributes, race was used to symbolize people of different lineage. During this era of thought, the definition of race was in line with the teachings found in the Old Testament. However, the typology of human, according to their common characteristics, came into order in the late 19th century (Banton, 2005, p. 53). The spread of scientific thinking had propagated the idea of classifying people scientifically, with the hope of developing deeper understanding of human being. People, just like animals and plants, can be categorized according to the features they have already ascribed. This caused racialization of people. People who share common physical attributes are classified as people of a common race. One of such classification is the Morton's five races. Samuel James Morton categorized people into Caucasian, Mongolian, Malay, American, and Ethiopian. In Banton's view, these developments later paved the way for the belief of white supremacy and as such, race is a product of the Westerners (Banton, 1997, p. 34).

Another point which could be found in Banton's explanation of race is that the Westerners' view of others can be associated to how an observer views a subject. While they were classifying people into races, they were also creating races from their perspective. Their work is clearly visible in the development of countries colonized by them. In the context of Malaysian plural society, the active participation of the British in constructing the identities of the then people of Malaya had been impactful. British had directly or indirectly constructed the meaning of Malay in Malaysia, when they enacted Malay Reservation Enactment 1913.

The enactment gave meaning to the definition of Malay and Malayness. It also gave life to the concept of Malay from the social actors as well as observers' perspective (Shamsul, 1999, p. 25). Similarly, the British had also contributed to the development of the identity of the Chinese in Malaysia. It was the role of the British as the colonialist which had empowered them to give official recognition. The identity of the Chinese in Malaysia became official when the British conducted census and started to label the people who originated from China as Chinese as early as 1871 (Shamsul, 1999, p.29).

However, as nations get more diversified in terms of people, race alone would not be able to draw the line between people. As a concept, the diversity has caused race to be unable to be used to classify people appropriately. Some people could be white but they are different in terms of their religions, languages, and places of origin. An individual may belong to more than one social group at any one time. The study by Mansor Mohd. Noor (1999, p. 77) elaborated how Malaysians placed universalistic norms above ethnicity. In the 1997-98 financial crises, Malaysians did not blame each other. They were aware that the market forces were the reasons behind the crises. Such awareness prevented ethnic conflict in Malaysia. Malaysians demonstrated the ability to choose not to see everything from the race angle. The experience of Malaysians could demonstrate how race is merely a socially constructed concept.

In relation to the above discussion, Banton has explained the nature of race and ethnicity, whereby both are socially constructed. Race could be summarized as a product of western imperialism. In the case of the Malaysian plural society, the British had contributed to its existence/development by not only encouraging mass migration of people from China, India and the Malay Archipelago into Malaya, but also in laying down the terms which now form the races of Malaysia. Under such circumstances, race and ethnicity do not stand on a concrete ground and they may change as societies align themselves to changes. The idea that race and ethnicity are socially constructed is supported by many other

scholars. Among them are Steve Jones (1998) and John Richardson, who together with John Lambert (1985), claimed that race is socially constructed. All of them agreed that race is a superimposed concept which is also a figment of imagination (Haralombos and Holborn, 2000, p. 204-205). To prove this, Richardson and Lambert explained that unlike animals, human can produce very different cultures in different environment; therefore, the idea of race, which is to typify people of the same physical traits as the same, is false.

CLIFFORD GEERTZ'S PRIMORDIAL TIES

While Banton focuses more on how race and ethnicity are merely created concepts, the motivation aspects of why they are created need to be investigated as well. People do not construct anything which does not carry meaning. The Westerners in the 19th century might be motivated to create race for political purposes, what was the motivation of the 20th century people? By the mid of 20th century, most states that were once colonized, emerged as independent states. Why would race and ethnicity still matter?

Clifford Geertz tried to explain in the newly formed states the phenomena of race and ethnicity, through his Primordial Ties theory. Geertz explained that people of the newly formed states were often caught in a dilemma. They are caught in a dilemma of whether to be loyal to states or to their ethnicity. Most of these newly formed states are multiethnic an outcome of colonization, where states were redefined or realigned, and immigration of labourers was encouraged. Such setting has allowed primordial attachment to play its role in forming groups of people which identify themselves by certain characteristics.

Primordial ties are sentiments which bound people together through blood ties, race, language, locality, religion, and custom. These ties act as strings and tie individuals who together form a community (Geertz, 1973, p. 259). Many modern new states do have such community

which therefore create heterogeneous societies. Individuals are tied or born into a particular community and will remain as members of the community through the primordial attachments. They are, in Geertz's words, being meaningfully sorted and cause the formation of a multiethnic society (Geertz, 1996, p. 41).

Individuals are given membership into certain community. Blood ties or quasi kinship is one of the keys which gives the pass for a person to join. The ties may not be genuine. It could be an assumed blood tie, such as the membership in a particular clan or tribe. When they are members of a particular kin unit, they may also fall into a common category of race and will thus share language, religion, custom, and even place of origin. Geertz does recognize that in a modernizing society, the strength of primordial bonds which differ according to individuals, societies, and times. However, Geertz firmly believes that somehow everyone will be bonded to certain groupings. The attachment, however, may generate chronic and severe tensions. The newly formed states may push for uniformity or a civil order. This may not be accepted by their people since uniformity or civil order will somehow erode their roots. This could be worse if the uniformity is done through domination of other ethnic groups. In retaliation, as pointed out by Geertz, political movements will be formed by the pressured group to ensure the survival and recognition of their group. Geertz used Malaya and several other newly independent countries to illustrate this point. In Malaya, the political parties which were race-based were formed to cater to the needs of the communities (Geertz, 1973, p. 283-286).

It is interesting to note here how Geertz's primordialism managed to explain the formation of Malaysia's major political parties, namely United Malay National Organization (UMNO), Malaysian Chinese Association (MCA), and Malaysian Indian Congress (MIC). The parties which were formed in the mid and late 1940s were primarily established to safeguard the needs of the communities they were representing and are still representing till today (Asnarulkhadi and Jayum, 1997, p. 54-55). UMNO is the

largest political party in Malaysia. It was formed when the Malays decided to unite against the establishment of Malayan Union. They saw Malayan Union as a threat to their common future, and UMNO was therefore formed to unite the Malays and ultimately to stop the British from carrying on with Malayan Union. The Malays were worried of the potential gloom in the future, especially when *jus soli* scheme citizenship policy was planned and employed by the British under the Malayan Union. Through the *jus soli*, the non-Malays would be awarded citizenship if they were born in Malaya. They were also worried of the possible take over by the Chinese (Mohd Nordin, 1974, p. 24).

At more or less the same time, the Chinese and Indians had also thought about their future. This development led to the establishment of MCA and MIC. Both parties were set up with the rights of the communities they were representing as their top agenda. Although these parties were able to unite under the *Parti Perikatan* and later *Barisan Nasional* flag, communalism which had its root in Geertz's primordialism was still an important factor that kept the parties going.

Based on the above discussion, Geertz's Primordialism does provide some light on why people are still very much divided in terms of race and ethnicity. When new states were formed, so were race and ethnicities. The two terms are now not defined by the Westerners, but by the people themselves in order to protect their own right as a social group to survive in the newly formed states. From this context, Geertz's theory has complimented Banton's theory, whereby in the contemporary societies, people construct their own social groupings using the primordial factors as guides. In other words, people of a particular ethnicity will continue to breed new members and socialize them into believing that they are the same and they must remain united for political mileages as well as the rights to live.

The mobilizationists disagree with Geertz's views because according to them, individuals actively construct their race and ethnic identity to obtain access to social, political, and economical resources and that nothing is inevitable or

natural about it (Haralombos and Holborn, 2000, p. 232). Civic consciousness and identity may also erode group boundaries described by Geertz. However, the mobilizationists need to understand that although may not be genuine, the primordial ties have somehow laid the foundation for the people to identify themselves collectively and it is through this collectivism that the people are able to mobilize their force and demand for social, politics, and economic access. In other words, the primordial ties are imminent to the formation of ethnic identity.

THOMAS HYLLAND ERIKSEN'S ETHNICITY

Both Banton and Geertz have explained how race and ethnicity have come into existence. Race was used by Geertz as one of the primordial factor. Meanwhile, Thomas Hylland Eriksen complimented both of them by explaining the meanings of race and ethnicity even further.

To Eriksen, race is socially constructed. This is an idea which is also shared by Banton. Both of them also see race as not very appropriate to be used. Banton has said that the term race is not concrete. Similarly, Eriksen (1996, p. 29) has also claimed that the term has no objective existence. Race, which refers to biological distinction between human, cannot really perform what it is supposed to do since human have interbred, and therefore, it is hard to distinguish people by referring to their biological features. Furthermore, it is important to note that there are also a lot of variations between the people of the same race.

Nevertheless, race is still a term which is used to categorize people. Race is not only used to classify people biologically. As highlighted by Banton, the term race has also been used to categorize people socially, although originally the 19th century scientists used it for biological purpose. Its distinction from ethnicity has often been overlooked. To Eriksen, ethnicity differs from race, while ethnic groups exist when groups of people see each other as different and consequently develop what is commonly known as racial stratification within a society (Eriksen,

1996, p. 30). Judging from Eriksen's definition of ethnicity, it is clear that his idea of ethnicity has some similarities with Geertz's Primordial Ties. Both see the objective of ethnic group as forming solidarity. Ethnicity is therefore mobilized as a force to gather political support, loyalty, etc.

Eriksen further contributes to the understanding of ethnicity by claiming that is not an issue when others do not exist. Ethnic group is socially constructed only when there are others. The ascribed aspect a person has is important when the person is engaging with people of other background (Eriksen, 2002, p. 10-12). It is then that ethnicity will come into existence and play an important role in a person's relationship with others. From this angle, Eriksen's view is quite close to what Banton has mentioned in his actor and observer's theory (Banton, 1996, p. 101). An actor will only be performing when there are other actors around. When each and everyone perform according to their roles, there will be a show. A member of a particular ethnic group needs to define or act as though he is a member of a particular group in the event he is with the others. This is important especially when the definition leads him to earn recognition from his own and at the end of the day, the recognition provides him an avenue to share whatever interest his group acquires when engaging with others.

Eriksen's view of ethnicity can be used to illustrate the construction of the contemporary Malaysian ethnic identities. As a plural society, Malaysians are bound to meet with people from different cultures. It is within these processes, Malaysians developed their ethnic identity by referring to the oppositional ethnic group. Lee Yok Fee's study on the construction of the Chinese identity showed how Malaysian Chinese used their ethnocentric perceptions about other ethnic groups in Malaysia in order to construct their own identity (Lee, 2009). In his analysis of the formation of the Chinese identities, his respondents differentiated their identities by comparing themselves with the oppositional ethnic groups. In the comparative discourse, they uttered prejudicial statement towards the

oppositional ethnic groups. These negative statements showed how the Chinese respondents stereotyped people from other ethnic groups negatively and ultimately helped the formation of positive stereotype of the Chinese, to which they belong to. This can also mean that within the Malaysian plural context, the Chinese will be creative and logical in constructing their everyday identity (Lee, 2009, p. 25). However, in the long run, these processes may generate ethnic polarization in Malaysia.

THE COMPLIMENTARY APPROACH: STITCHING THE BIG PICTURE OF RACE AND ETHNICITY

Banton, Geertz and Eriksen have laid down their points of view in the discussion of what race and ethnicity really are. All three of them have contributed uniquely. Does this mean they are different? Yes, they are different in the context of how each of them has contributed their own ways of defining and interpreting race and ethnicity. However, this does not mean their theories are not complimenting and have failed to generate the picture of what race and ethnicity are.

Their theories should be understood not from the perspective of how their theories are distinctive, but when they are stitched together, these theories draw a big picture of what race and ethnicity are. Both concepts cannot be understood from a single dimension approach alone, as they can only be understood using the multi-dimension approach. In other words, they are flexible in nature and may carry different meanings at different points of time and setting. Thus, although the theories by Banton, Geertz and Eriksen are distinctive, they are able to form a more comprehensive and compact picture when stitched together. Their theories should be arranged in a complimenting manner, although adjustment may still be required to ensure that their theories can fit in the big picture.

Banton provides the historical understanding of the development of race and ethnicity. As discussed earlier, race was developed in the 19th century by the Westerners and this development has had social implications when it is used to

classify and measure people. The classification has not only caused dire consequences to people, but also to the newly formed race and ethnic groups which affected the newly formed nations in the mid of the 20th century. According to Geertz, in the newly formed nations, people have the tendency towards primordial sentiment and the thought that they are different, which resulted from the idea of race brought about by the Western powers, nearly colonized the whole world at one point of time.

Due to the variation that can be found within a race, as well as the impracticality of the term, race is no longer suitable to be used to describe the diversity of human being. Eriksen strongly believe ethnicity is a better word to be used. His view should be accepted since the contemporary societies are much more heterogeneous than before. Heterogeneity is actively constructed when individuals start to identify themselves as members of certain ethnic group. Hence, race as a biological concept has failed. Eriksen did not entirely reject primordialism as one of the factors which leads to ethnic identification. According to Eriksen, individuals are socialized to be members of certain ethnic group. Primordialism binds people together. People actively link themselves to their ethnicity when dealing with people of different backgrounds. This thought is also shared by Banton when he agrees that ethnicity is a product of how a person acts to become a member of an ethnic group when dealing with others.

Therefore, it is clear now that race and ethnicity are socially constructed through perception. Both are developed through how one group of people perceives others and at the same time themselves. The outward perception requires them to identify others as different, which will come about when the inward perception constantly reminds these individuals that they are different. At the same time, conflicts due to shared interest with others will continue to strengthen the inward perception. All these are built upon learning in the socialization process of the group.

CONCLUSIONS

In many areas, the development of the Malaysian plural society can be discussed from the views of Banton, Geertz and also Eriksen. If stitched together, their views would be useful to describe how Malaysia had developed into a plural society during the British colonization and has continued to be plural even after the end of colonization. In fact, Malaysia is now more plural than before when Malaysians are actively constructing their own identities. Banton's idea of race shows how the British laid down the parameters of the Malaysian ethnic identities. In particular, Geertz explained the persistence of race and ethnicity in the Malaysian political scenario, while Eriksen proved how Malaysians are constructing their ethnic identities using each other as mirrors. In sum, sociological race and ethnicity theories should be seen as complimenting rather than contesting or even substituting one another.

In spite of all the above, the world is constantly changing. These changes are affecting how one individual perceives another. There are other factors which affect human interaction and how they understand each other. Stuart Hall (1996, p. 161) describes modern human as mongrel. Modernity has caused individuals to occupy several identities at any one time. Thus, race and ethnicity are just ones of the many. In some societies, the idea of race and ethnicity may not carry much meaning. What matter most for them could be other forms of identities, such as class and gender. Meanwhile, structural changes will lay the foundation for the changes in the meanings of identities. The changes in the identities will later force for structural changes. This will subsequently influence how an individual perceives another as he or she has many other things to consider about and at the end of the day, it will cause the creation of a new form of identity. Thus, race and ethnicity are just parts of the structure developed by people's actions and those who choose to believe them. In the Malaysian context, economic development has developed fluidity of ethnic identity and boundary (Mansor, 1999, p.75). The encroachment of universalistic

norms, such as the self interest in material kind, status kind and obligation kind, has reduced the influence of ethnicity in dictating the relationship of Malaysians. These developments have contributed to the relatively harmonious relationship among them.

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GIS Visualization of Population Censuses in Peninsular Malaysia: A Case Study of Jempol, Negeri Sembilan, 1947-2000

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ABSTRACT

Census has become an important administrative tool for governments to trace and plan for national progress since it contains essential information about the populations. Studies of economics, sociology, history, rural development, and agriculture commonly used censuses. Nevertheless, these studies mostly focus on the textual and numerical analysis of the census data without paying much attention to the sense of space of the censuses. Hence, Geographic Information System (GIS) could help by enabling population censuses to be spatially visualized and analyzed. In this study, two common techniques in GIS were used to spatially visualize human population censuses of Jempol district, Negeri Sembilan in the 20th century. Using GIS, the available population census data of the district were transformed into choropleth and cartogram maps of population density. The two types of map were then compared based on their usefulness and appearance in visualizing the censuses. It was found that each type of maps has its own strengths and weaknesses, but overall, the application of GIS has been found to be an exciting and reliable medium for the spatial analysis and visualization of the censuses. The findings suggest that GIS adds another dimension in understanding past demographic phenomena in the study area. It is recommended that further research in this area, such as overlapping the spatial analysis with topographic elevations and socio-economic characteristics, as well as constructing linear and non-contiguous cartograms, should be conducted. Besides enhancing the spatial analysis of the censuses, this research paves way for the development of Historical GIS studies in Malaysia.

Keywords: Human population censuses, spatial analysis, Historical GIS

INTRODUCTION

A population census is 'the total process of collecting, compiling and publishing demographic, economic and social data pertaining, at a specified time or times, to all persons in a country or delimited territory' (United Nations, 1958, p.3). Censuses have become an important administrative tool for governments in tracing and planning for national progress. By correlating the number of people with socio-economic factors, such as job employment, commodities export, and income

distribution, a sound planning for the national progress could be made.

Population census in Malaysia began at the beginning of the nineteenth century when the inhabitants of the Straits Settlements (S.S) of Penang, Malacca, and Singapore were first separately counted in 1801, 1826, and 1824. The first modern population census in Malaysia was firstly established in 1871 and later in 1891 and 1901, and the enumeration was later expanded to Negeri Sembilan, Perak, Selangor and Pahang, in conjunction with the establishment of Federated

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Malay States (F.M.S) under the British colonial government. The complete set of the population statistics for the whole Peninsular Malaysia was first made available in the year 1911. However, no census was undertaken during World War II. Two years later, i.e. in 1947, the census was continued. With the formation of Malaysia in 1963, the next census was held in 1970 and it covered the entire Peninsular Malaysia as well as Sarawak and Sabah (Saw, 2007). Thereafter, the national census was conducted decennially with the most recent one in 2008 (<http://www.statistics.gov.my>).

Since then, studies in economics, sociology, history, rural development, and agriculture have commonly used censuses (Lim, 1967; Wafa, 1972; Ooi, 1976; Hill, 1977; Abdullah, 1989a,b; Kato, 1991:1994; Rigg, 2003). Nevertheless, these studies mostly focus on the textual and numerical analysis of the census data without paying much attention to the sense of space of the censuses. In other words, census-related studies and literature in Malaysia thus far mostly

present their results in tabular and graph formats. These studies do not use spatial representation and analysis, despite the fact that maps are suitable tools to visualize the numerical data (Campbell, 1993; Cartwright *et al.*, 2007).

In recent years, as a spatial database management system (DBMS), the Geographic Information System (GIS) has developed powerful tools for visualizing data (Peters and MacDonald, 2004; Fisher and Unwin, 2005; Liao *et al.*, 2010). This development naturally leads to the emergence of new sub-disciplines or interdisciplines and one of them is Historical GIS, in which the GIS provides the investigation tool to study past phenomena, including demographic patterns, changes in land use and geopolitical scenarios (Gregory and Ell, 2007; Knowles, 2008). Since Historical GIS in Malaysia is still relatively lacking, this study was conducted to apply GIS to visualize the population censuses in Peninsular Malaysia in the 20th century.

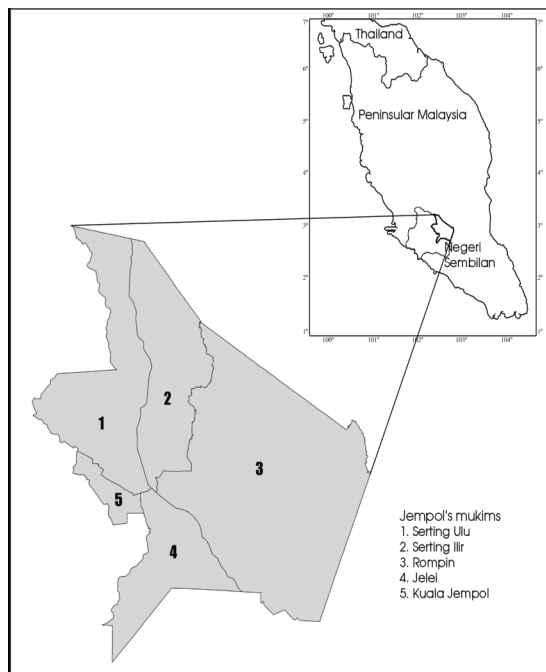


Fig. 1: Location of Jempol district, Negeri Sembilan, Peninsular Malaysia. Enlarged figure shows the five mukims in Jempol

MATERIALS AND METHODS

The district of Jempol in Negeri Sembilan was chosen as a case study since it contains several *mukims* (subdistricts) of different sizes and population densities. Jempol is located between the latitudes of $2^{\circ}35' - 3^{\circ}10'$ North and longitudes of $102^{\circ}10' - 102^{\circ}45'$ East (Fig. 1). It is the biggest out of the seven districts in Negeri Sembilan. The total land area of Jempol district is estimated to cover 138,569 ha, which is approximately 21 percent of the total land area of Negeri Sembilan. Prior to 1980, all the *mukims* of Jempol were under the administration of Kuala Pilah district office and Jempol only became an administrative and registration district on its own on the 1st of January 1980. Five *mukims* were gazetted, namely Kuala Jempol, Jelei, Seriting Ilir, Seriting Ulu, and Rompin. Among them, Rompin is the biggest whereas Kuala Jempol is the smallest *mukim*. According to the Jempol District and Land Office, there was no amendment in terms of a *mukim*'s extent during the demarcation of Jempol district in 1980 (Mat, 2008 pers. comm). Bahau, which is located within the Jelei mukim, is the capital town of the district. Jempol was dubbed as the '*Daerah Laluan Bersejarah*' (District of Historic Route) on 24th March 1998

as a token of appreciation to the historic site of *Penarikan* land portage (Ibrahim and Jamaludin, 1999; Wheatley, 1961).

This study was divided into three steps, as follows:

1. Exploring data availability
2. Establishing a base map
3. Conducting GIS analysis

Exploring Data Availability

The population censuses of Jempol were obtained from the Department of Statistics Malaysia (DoSM). While the intention was to go as far back as possible to investigate the demographic changes that took place in the district in the 20th century, this study found that the available censuses merely started from 1947. Much to the researchers' dismay, and as discussed by Fong (1983), the censuses and their raw data collected before the 1947 had been either misplaced or destroyed. In this study, the censuses of Kuala Pilah district according to its *mukims* from 1947 to 1970 were obtained in order to 'construct' Jempol within the periods of study since Jempol was under Kuala Pilah district prior to 1980.

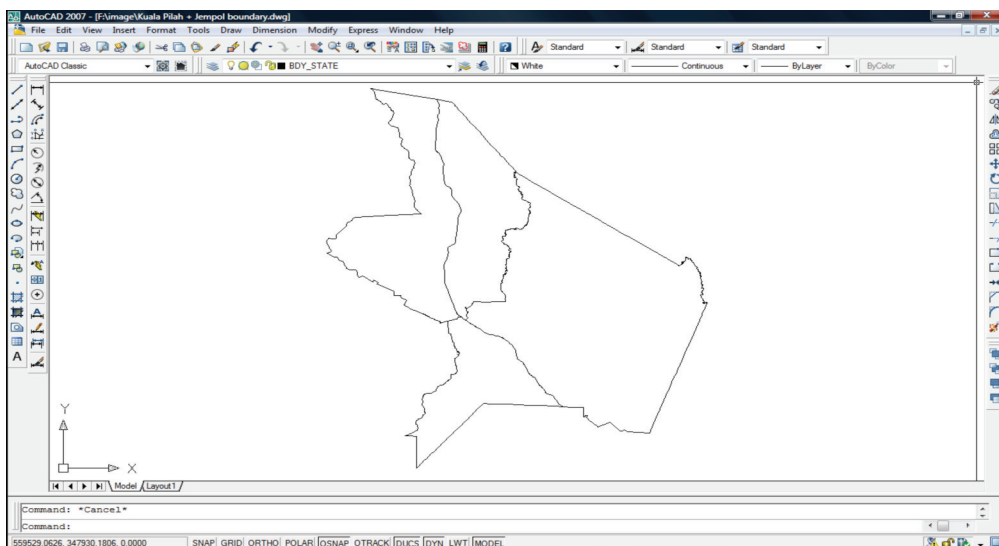


Fig. 2: 'Extracted' mukim's boundary of Jempol using AutoCAD 2007 (Modified from JUPEM, 2008)

Establishing a Base Map

In establishing a base map, two main steps were conducted in this study, and these are as follows:

Building up the mukim’s boundary

The topographic digital maps of Jempol district were obtained from the Department of Survey and Mapping Malaysia (JUPEM). The maps are the compilation of georeferenced map sheets digitally published that were based on the aerial photographs taken in 1985. The boundary of the *mukims* within the maps was ‘extracted’ using AutoCAD 2007 (Fig. 2). The boundary was then exported into GIS. In GIS, polygons of the boundary of the *mukims* were constructed using EditTools 3.6 in ArcView 3.3.

Keying in censuses into GIS attributes

Since Jempol was in the district of Kuala Pilah prior to 1980, the censuses of Jempol before that particular year were derived by extracting the censuses of five *mukims* of Jempol, namely Kuala Jempol, Jelei, Serting Ilir, Serting Ulu, and Rompin, from the Kuala Pilah censuses (Table

1). Since there was no amendment in terms of the five *mukim*’s extent in demarcating Jempol district in 1980 (Mat, 2008 pers. comm), the extraction of the five *mukims* from Kuala Pilah censuses to ‘construct’ Jempol district before the 1980 is considered as acceptable in the present study. The censuses were then keyed in the GIS attributes using ArcView 3.3 (Fig. 3).

Conducting the GIS Analysis

In this study, two types of map, known as choropleth and cartogram, were constructed using GIS to conduct visualization analysis of the censuses.

Choropleth map

A choropleth map is ‘a quantitative areal map in which the average magnitude of a phenomenon is indicated by a distinctive tone, pattern, or colour applied over each unit area. Unit areas are delimited by state or county boundaries, or other arbitrary boundary lines’ (Campbell, 1993:

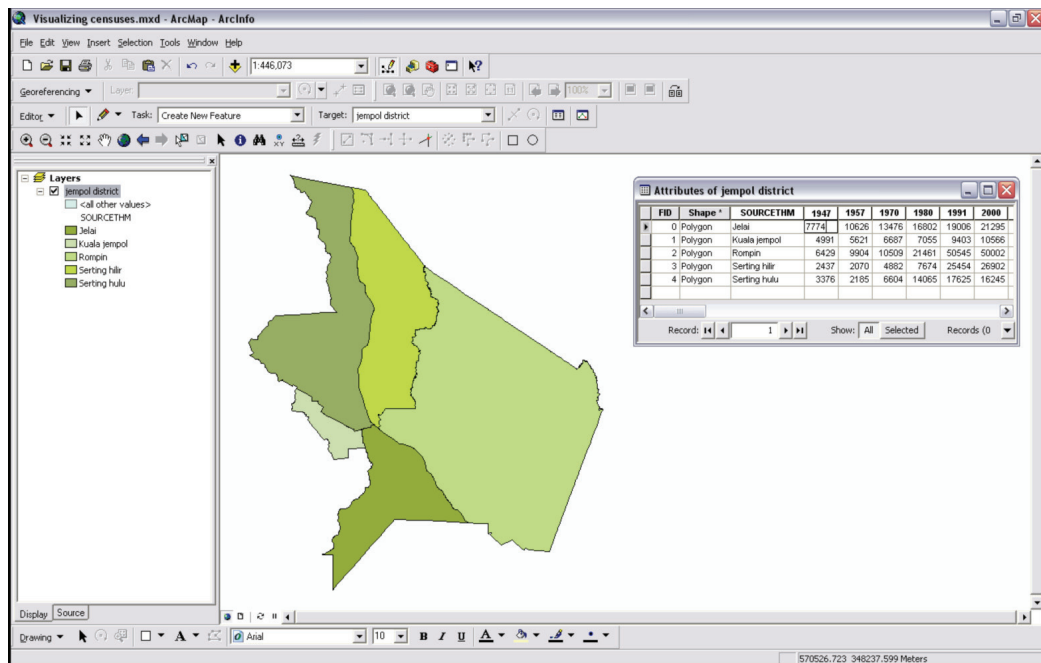


Fig. 3: Key in censuses into GIS attributes

TABLE 1
Total population in Jempol district based on its mukims, 1947-2000

Year	1947		1957		1970		1980		1991		2000							
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total						
Mukim																		
Jelei	4603	3171	7774	5766	4860	10626	6751	6668	13419	8334	8468	16802	9416	9590	19006	10500	10795	21295
Kuala Jempol	2385	2606	4991	2631	2990	5621	3203	3498	6701	3447	3608	7055	4506	4897	9403	5105	5461	10566
Rompin	4030	2399	6429	5559	4345	9904	5543	5029	10572	10834	10627	21461	25771	24774	50545	25879	24123	50002
Serting Hilir	1363	1074	2437	1146	924	2070	2285	2210	4495	3832	3842	7674	13211	12243	25454	13578	13324	26902
Serting Ulu	1826	1550	3376	1058	1127	2185	3251	3238	6489	7080	6985	14065	8806	8819	17625	8046	8199	16245
TOTAL	14207	10800	25007	16160	14246	30406	21033	20643	41676	33527	33530	67057	61710	60323	122033	63108	61902	125010

Source : DoSM

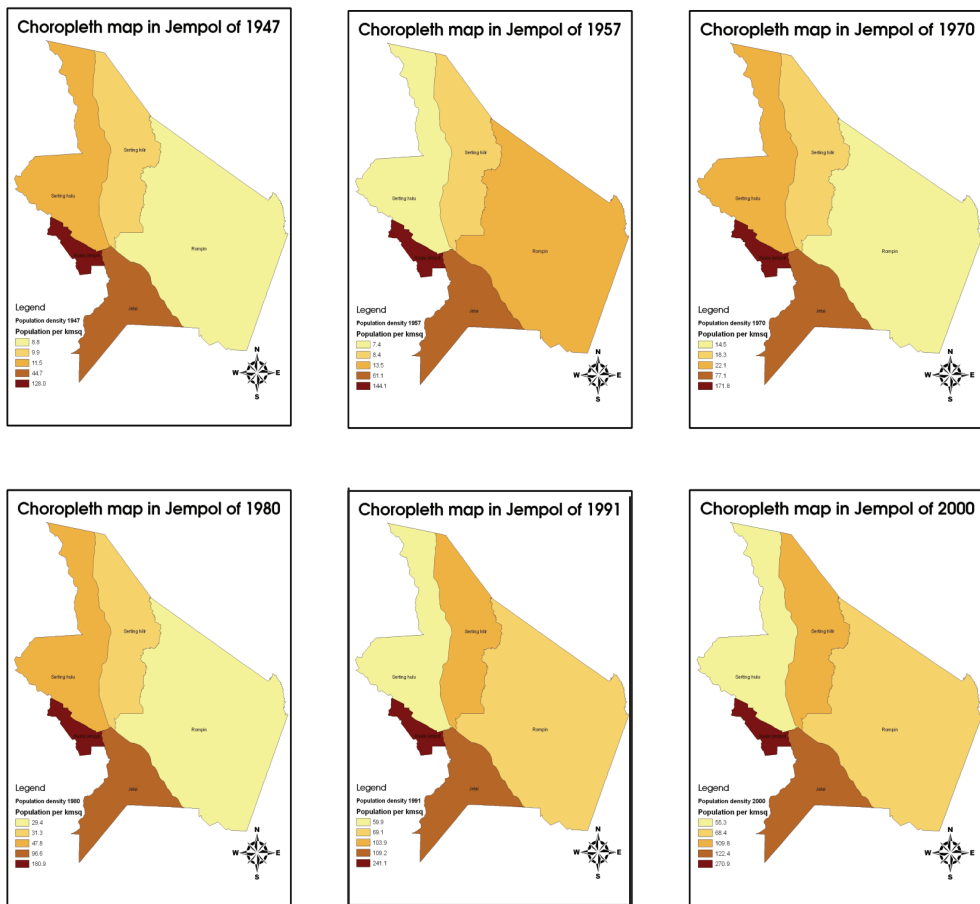


Fig. 4: The choropleth maps of population density, 1947 – 2000

400). The choropleth maps of population density according to the *mukims* in Jempol from 1947 to 2000 were generated using ArcView GIS 3.3 and ArcGIS 9.2. In producing the maps, three steps were followed:

1. An attribute data of areal size for each mukim was produced using XTools extension in ArcView GIS 3.3.
2. Using Field Calculator in ArcView GIS 3.3, the attribute data of population density based on the *mukims* in Jempol was constructed. Here, the population density is given by:

$$\text{Population density} = \frac{\text{Total population in a mukim}}{\text{Total area of mukim (km}^2\text{)}}$$

3. The population density was ranked and presented spatially in a choropleth map using ArcGIS 9.2.

Cartogram Map

A cartogram map is ‘a special type of map, in which a different standard of measurement, such as time or cost, is substituted for distance measurement, or in which the area of regions is made proportional to some other measure, such as population or income’ (Campbell, 1993, p.

399). There are two main types of cartograms, namely area and distance cartograms. In this study, the area cartogram maps for the *mukims* in Jempol from 1947 to 2000 were produced in ArcGIS 9.2. The maps were generated based on the Gastner-Newman method (Gastner and Newman, 2004). In constructing the maps, three steps were followed:

1. The query of population density for Jempol has been built in Definition Query of ArcGIS 9.2.
2. Using Cartogram toolbox of Gastner and Newman (2004), a geodatabase of population density was generated.
3. The population density cartogram map was made using ArcGIS 9.2.

RESULTS AND DISCUSSION

The choropleth maps (*Fig. 4*) clearly depict the population density changes in Jempol's *mukims* over the study period. The topology and shape of the *mukims* can be recognized quickly, particularly by someone who is familiar with the map of the study area. Since the data appearance of the population density on the choropleth maps was differentiated based on colour tones while remaining fixed in their geographic locations, the visualization is considered location orientated. This means if a coordinate of Kuala Jempol for

instance is specifically located at coordinates (X_n, Y_n) with the total area of $X \text{ km}^2$ in 1947, the location and its areal size remain the same until the year 2000. The only change is its colour tone appearance since the values of population density have changed over time. Therefore, the location and topology of each *mukim* are clearly visualized and consistent throughout the census years. However, a choropleth is only suitable in visualizing the censuses using different colour tones. If the maps are visualized using a single hue, the pattern and ranking of population density may disappear.

In contrast, the cartogram maps (*Fig. 5*) provide a different visual impact because the *mukims* appear to be expanding and shrinking according to the changes in the population density over time. It shows that Kuala Jempol has consistently become the biggest in term of size from other *mukims* for the past 53 years, especially in the year 1947, 1957, and 1970. Rompin was found to be otherwise, i.e. it had gradually become the smallest before increasing in size by the year 2000. These cartographic changes make it very easy to visualize the pattern and ranking of population density between the *mukims* throughout the census years, even by using colour tones or hues. Since the *mukims* area was cartographically modified according to their density values, the visualization of cartogram is considered space orientated. In

TABLE 2
Comparison between choropleths and contiguous cartograms of Gastner-Newman

Choropleth maps	Cartogram maps of Gastner-Newman
Kuala Jempol is the smallest in size	Kuala Jempol is the biggest in size
Rompin is the biggest in size	At first, Rompin is the smallest but gradually increasing in size
'Location orientated' because the <i>mukims</i> density were differentiated based on tone colours while remaining their geographic locations	'Space orientated' because the <i>mukims</i> area were cartographically modified according to their density values
Topology (connectivity between <i>mukims</i>) is maintained with retained areal sizes	Topology (connectivity between <i>mukims</i>) is maintained with unretained areal sizes
Pattern and ranking is visible but not clear	Pattern and ranking is visible and clear

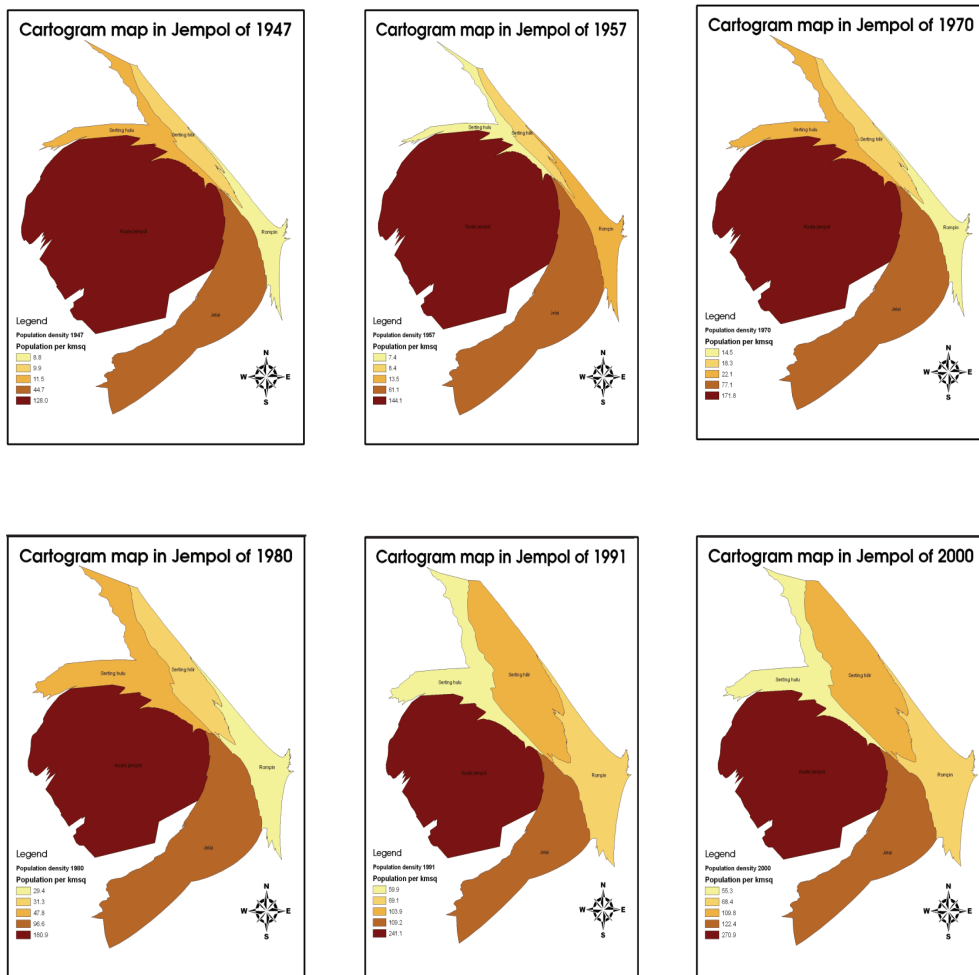


Fig. 5: The cartogram maps of population density, 1947 – 2000

other words, if a coordinate of Kuala Jempol for instance is specifically located at (X_n, Y_n) with the total area of $X \text{ km}^2$ in 1947, the location and its spatial extent would be changing depending on the calculated density values throughout the census years.

The population patterns of Jempol in the 20th century can be classified into two different periods: (1) British colonial and (2) post-colonial or Independent Malaya. The colonial period covers the first two census years of 1947 and 1957. The British government conducted

the last census in 1957 before the Federation of Malaya achieved its independence on 31st of August 1957 (Hasan and Kasim, 2007). At the time, Jempol was under Kuala Pilah district. As visualized on the choropleth maps, human population was found to be extremely concentrated in the south-western part of Jempol. The resettlement project of New Village due to the Emergency state in the mid-20th century was suggested to be the main cause for this particular demographic phenomenon. In Negeri Sembilan, two programmes known as ‘Briggs Plan’ and

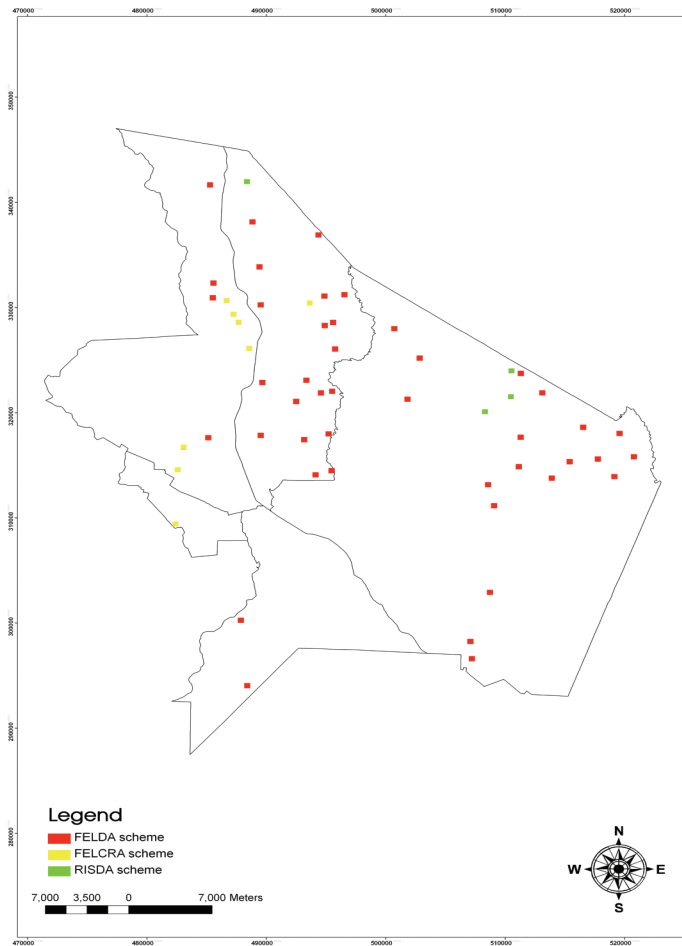


Fig. 6: Spatial distribution of land development schemes in Jempol during the post-colonial era
(Adapted from the JUPEM's topographic digital map, 2009)

'Central Rice Kitchen' were initiated (Dartford, 1958; Sheppard, 1965; Hack, 2001). Under the programmes, the families who were living in the remote area and were susceptible to the insurgent communist attacks were relocated into the new settlements which were tightly controlled by the government security forces (Ooi, 1976; Gullick, 2003; Saw, 2007). Within the Kuala Pilah district, there were three locations involved under the project, namely Simpang Pertang, Ulu Juasseh and Bukit Gelugor, which are situated in the south-western part of Jempol (Atlas Kebangsaan Malaysia, 1977).

The post-colonial period covered the census years of 1970, 1980, 1991, and 2000. After the independence, rural development was given a high priority by the new independent government. The main focus of the development had been on upgrading rural infrastructure as well as increasing agricultural productivity (King and Mohd. Jali, 1992). In Jempol, under the *Buku Merah* (Red Book) Rural Development Plan, an irrigation scheme was launched at Kampung Kuala Jempol in 1963 which aimed to develop wet paddy cultivation activities in the district. After Jempol was officially gazetted as a

registration district of Negeri Sembilan in 1980, more efforts were implemented by the local authority to develop Jempol as an important agro-industry hub (Mat, 2008 pers. comm). One of the efforts was opening up new land to be settled and cultivated with commercial crops, especially rubber and oil palm. Therefore, several land development schemes were organized in Jempol under the Federal Land Development Authority (FELDA) Scheme, Federal Land Consolidation and Rehabilitation Authority (FELCRA) Scheme and Rubber Industry Smallholders Development Association (RISDA) Scheme. The rural development projects affected demographic patterns in Jempol. The population concentration in the south-western part of Jempol started to decrease as a result of human migration to the land development schemes, which were mostly located in the north-eastern part of Jempol (Fig. 6.) (Hashim, 2006).

CONCLUSIONS

GIS is a reliable medium in visualizing as well as analyzing human population censuses. Its capability in directly linking the aspatial data (censuses) and spatial data (Jempol *mukims* vector map) allowed the censuses to be spatially visualized. This cartographic feature opens up new possibilities because 'maps are visual, immensely appealing, and can be rhetorically powerful' (Dodge and Perkins, 2008). Besides, it enhances the historiography of the demographic phenomenon in the study area. It is recommended that further research in this area, such as overlapping the spatial analysis with human land use, topographic elevations and socio-economic characteristics, as well as constructing linear and non-contiguous cartograms, be conducted. Besides enhancing the spatial analysis of the censuses, this research paves the way for the development of historical GIS studies in Malaysia.

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Representation of English Front Vowels by Malay-English Bilinguals

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ABSTRACT

This paper presents the results of a study conducted to investigate the representation of English vowels among Malay-English bilingual speakers. The study focused on five front vowels of English. There is a tense-lax contrast in high- and mid-vowels in English (Davenport and Hannahs, 2005; Fromkin, Rodman and Hyams, 2003), but this contrast does not exist anywhere in Malay (Nik Safiah *et al.*, 2008). Thus, a forced choice identification task is constructed with PRAAT (Boersma and Weenick, 2009). Stimuli for the experiment were synthesized using the AT&T text-to-speech demo programme available from AT&T Labs. The values of the first and second formants of the vowels were checked to make sure that they were within the range given in the literature. Fifty-two Malay-English bilingual undergraduates participated in this study. The results showed that Malay-English bilinguals have only three categories of contrast for the front vowels. These results show that the vowel representation of the second language in Malay-English bilinguals is similar to the representation of vowels in the first language.

Keywords: Bilingual speech perception, Malay-English bilinguals, vowel representation

INTRODUCTION

Both anecdotal and instrumental accounts of variation in English pronunciation among Malaysian speakers are available in the literature (e.g. Zuraidah, Pillai and Tang, 2008; Pillai, 2008; Baskaran, 2005; Platt and Weber, 1980; Hart, 1969). Experienced English teachers may also be able to provide a list of commonly mispronounced words by Malaysian ESL learners. For example, Malaysians often use context to disambiguate between words like *pitch* and *peach*, and words like *pen* and *pan*. However, the cause(s) of such variation in pronunciation and the link with perception of vowels have not received much attention.

Baskaran (2005), in her discussion about the phonological properties of Malaysian English, provides a descriptive account of such variations

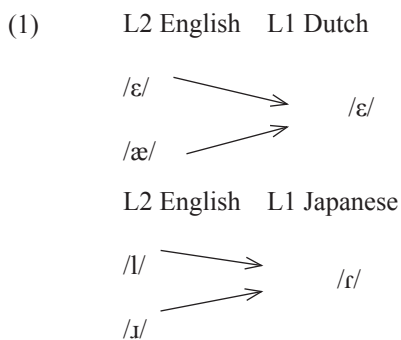
but no discussion was made on the perception of English vowels by Malaysian English speakers. Zuraidah, Pillai and Tang (2008) showed that Malaysian English vowels occupy a more compact vowel space compared to the British or American English varieties. They provided the mapping of 11 vowel categories, 4 of which were front vowels (/i/, /i/, /e/ and /æ/), focussing on the monophthongs.¹ However, the study focussed only on speech production and not on the perception of English vowels by Malaysian speakers of English. This is the gap in the literature, which is partially filled in the current study. This study sets out to ascertain the mental representation of English front vowels among Malay-English bilingual speakers by looking at their perception of these vowels.

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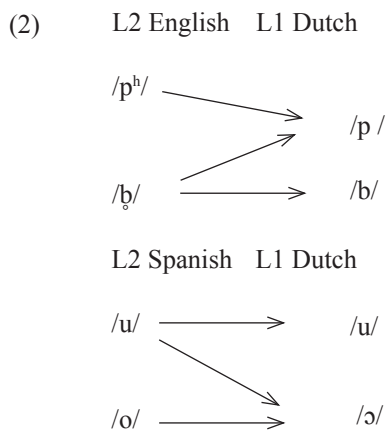
Studies on second language (L2) speech perception have identified three patterns in the perception of non-native contrasts: single-category, two-category and multiple-category assimilation (e.g. Best, 1995; Flege, 1995; Escudero and Boersma, 2002). The first two patterns, namely single-category and two-category assimilation, are well-documented in the Perceptual Assimilation Model (Best, 1995) and the Speech Learning Model (Flege, 1995). The basic claim of these two models is that the learners' first language (L1) influences the perception and the development of categorical contrasts in the second language. When the target L2 language has more categorical distinctions than what is available in the L1, single-category assimilation occurs, and this is probably as a result of poor perceptual differentiation of categorical contrasts in the L2. In such cases, the initial state of L2 mapping is a copy of the L1 perceptual space. Evidence of category assimilation is reported in the literature for language learners with various L1s. For example, Escudero and Boersma (2002) provide the following examples:



L1-Dutch ESL learners merge English mid- and low-front vowels, /ɛ/ and /æ/, respectively to a single category, /ɛ/, because the categorical distinction that is available in English does not exist in Dutch. Similarly, Japanese learners merge the categories for the lateral and the central approximant in English to the Japanese flap. These examples of single-category assimilation are considered as the most problematic for

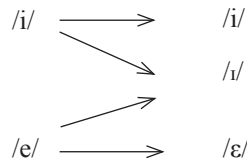
L2 learning with implications not only in lexicalization but also for attainment of native-like speech production.

The second pattern of non-native perception involves the two-category assimilation, where a binary contrast in the L2 is mapped to a binary contrast found in the L1. Best (1995) and Flege (1995) consider this pattern of perception as less problematic compared to the single-category assimilation cases because the categorical contrast in the L2 is preserved to a certain extent. The following are examples of the two-category assimilation provided in Escudero and Boersma (2002).

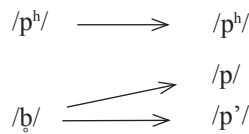


Escudero and Boersma (2002) argued that multiple-category assimilation could also be problematic for acquisition of L2 contrasts. Such cases of assimilation occur when there are fewer categories of contrast in the L2 compared to that found in the L1. For example, as shown in the following examples taken from Escudero and Boersma (2002), there are more categories of vowels in Dutch compared to those found in Spanish, and more categories of stops are found in Korean compared to those that in English. In such situations, L2 learners also start with an initial mapping similar to that which is available in the L1, but as they advanced, Escudero and Boersma (2002) found that the L2 learners were able to reconstruct their perceptual boundaries to eliminate the extraneous category in their representation for the L2.

(3) L2 Spanish L1 Dutch



L2 English L1 Korean



In the context of the languages that were investigated in this study, English and Malay, instances of single- and two-category assimilation are expected since the number of vowel categories found in English is greater compared to those found in Malay.

A Comparison of the Vowel Inventories in Malay and English

Figs. 1 and 2 summarise the differences in the vowel inventories of Malay and English. There are far more vowel categories in the English speech system compared to Malay. In particular, there are five front vowels in English compared to only three in Malay. Moreover, the tense-lax contrast that exists in English is absent in Malay. Vowel length, i.e. a phonetic character of tense vowels (Fromkin, Rodman and Hyams, 2003), is also not distinctive in Malay. In addition, the mid-front vowels, [e] and [ε], are allophonic variants of the phoneme /e/ in Malay (Nik Safiah et al., 2008).

	Front	Central	Back
High	i		u
Mid	e	ə	o
Low	a		

Fig. 1: Vowel phonemes in Malay (Nik Safiah et al., 2008)²

	Front	Central	Back
High	i		u
	ɪ		ʊ
Mid	e	ə	o
	ɛ	ɜ:	ɔ
Low		æ	ɒ
		ʌ	ɑ:

Fig. 2: Vowel phonemes in English (adapted from Davenport and Hannahs, 2005)³

MATERIALS AND METHODS

Instrument

A forced-choice identification experiment was constructed using PRAAT (Boersma and Weenick, 2009). The stimulus items were *beat*, *bit*, *bait*, *bet*, and *bat*. The stimulus items were generated using the AT&T text-to-speech demo programme using four speakers: two male and two female speakers, 2 American and 2 British speech models to represent the two English varieties. These stimulus items were pilot-tested with ten Malay-English bilingual speakers. The one-sample Kolmogorov-smirnov test showed that the normality assumption is met with the data in the pilot study, and a two-tailed paired sample *t*-test conducted on the results of the pilot test found no significant difference in the response to the American and British stimulus items ($t(9) = -1.62, p > 0.05$). Based on these results, it was decided that the identification experiment could and should include both the American and British stimulus items because Malaysian speakers are exposed to both varieties.⁴ The values of the first three formants of the vowels were also checked to make sure that they were within the range of the relevant vowels in the literature. Table 1 presents the vowel formant values for the items generated and the respective formant values for the vowels in American English.

The experiment was also pilot-tested with one American English native speaker to check the suitability of the stimulus items used. The native speaker performed appropriately at the

TABLE 1
Vowel formant values of the generated stimulus items⁵

Vowels	American English (Davenport and Hannahs, 2005)			Mean formant values for generated samples		
	F1	F2	F3	F1	F2	F3
/i/	280	2320	2870	297	2427	2935
/I/	440	2000	2730	453	1807	2551
/e/	NA	NA	NA	482	2102	2749
/ε/	580	1740	2510	620	1741	2648
/Θ/	690	1440	2430	777	1541	2376

level of 100% for four of the vowel categories. However, a lower percentage was obtained for *bet* (87.5%) because the participant made two errors by clicking on the wrong word in trying to complete the task quickly. The native participant informed the researcher of the errors made. Since the performance for the other categories were perfect, the same experiment was used with the Malay-English bilinguals.

Participants

The participants involved in the study were Malay-English bilingual undergraduates from a public university in Malaysia. A total of 52 students volunteered for the study. Volunteers were elicited from two groups of students which had been identified for the study. The first group were students taking English language related majors but had not taken a course in English phonetics and phonology. They were selected to represent the advanced group in terms of English language proficiency. The participants were majoring in English Language (22), English Literature (5), and TESL or Teaching of English as a second language (7). Eleven of the participants had obtained a Band 3, twenty had a Band 4, while three had a Band 5 in the Malaysian University English Test (MUET). The second group of the participants were students who had been selected from those enrolled in the

first level of the compulsory English language proficiency class at the university to represent the group with a lower level of English language proficiency. Sixteen of the students had obtained a MUET score of Band 2, while two others obtained a Band 3. These students were of Economics (8), Mathematics (2), Engineering (1), Physics (3), Microbiology (1), and Arabic (3) majors. None of the participants in both groups had had any training in English phonetics when they participated in the experiment.

Research Procedure

The data collection session was conducted in a language laboratory. Each student was assigned a seat at the language laboratory. They were asked to fill in a background questionnaire, which elicited information about their mother tongue, the dominant language used, English proficiency courses taken at the university, and their MUET scores. The participants were then briefed on the procedure involved in the experiment. They were told that they would hear a word over the headphone and that they had to indicate the word they had heard by clicking on it on the computer screen. They were told that the word would not be repeated and that they had to provide an absolute certainty judgement of their answer by choosing from a scale of 1

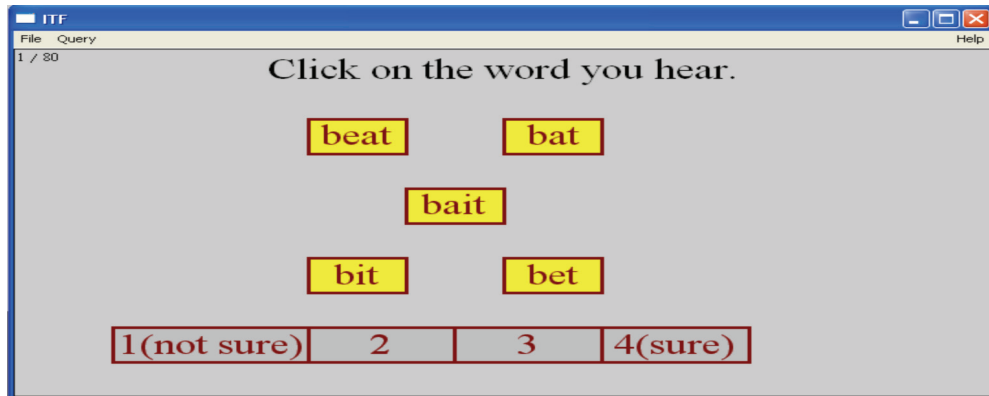


Fig. 3: Screenshot of the experiment interface

to 4 (1 for not sure, and 4 for sure). Once the certainty judgement was made, the following word was presented. Fig. 3 shows the interface for the forced-choice identification experiment.

The stimuli were presented in a random order using PRAAT, with an inter-stimulus interval of 500ms. A total of 20 different stimulus items was presented with four repetitions of each item resulting in a total of 80 trials, that were presented in four blocks of 20 items each.

Data Analysis

Data from the experiments were extracted from PRAAT, coded, and analysed using SPSS. Correct identification was assigned a score of one point, while incorrect answers were given a score of zero. The score for each vowel category was tabulated. The percentage contributed by the distractors for each vowel category was also tabulated. The reported MUET scores were used to group the students into two groups, according to their level of proficiency in English. The one-sample Kolmogorov-Smirnov test of normality was used to test for normality of distribution in the data. The results show that normality could not be assumed for all the categories of vowels; hence, the Mann-Whitney *U* test was used to compare the performance of the students in the two groups for each vowel category.

RESULTS AND DISCUSSION

The results shown in Fig. 4 indicate that the Malay-English bilinguals performed relatively well in the identification of two vowel categories, namely the mid-front tense vowel /e/ in *bait*⁶ and the low-front vowel /æ/ in *bat*.

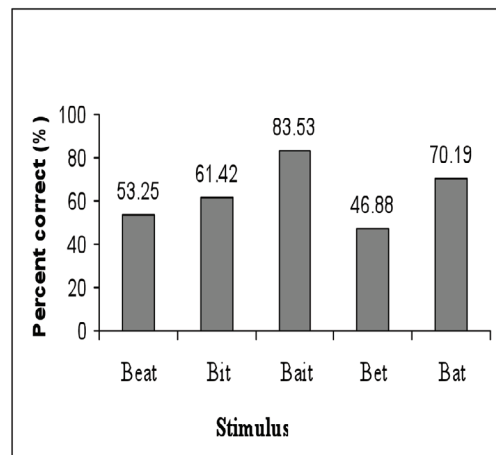


Fig. 4: Identification of the front vowels

An interesting pattern was found when the distractors for each stimulus item were analysed. The highest percentage of distraction for *beat* was *bit* and vice versa, as shown in Figs. 5 and 6. The results show that the Malay-English bilinguals have a difficult time discriminating the tense and lax high-front vowels in English.

Bit is also an overwhelmingly strong distractor when *beat* is presented. The results suggest a possible assimilation of these two categories of English vowels in the mental representation of the Malay-English bilinguals. It is important to note that the Malay language does not have a tense-lax distinction or a length distinction for its vowels. While the English high-front tense vowel, which is usually realised longer in length compared to its lax counterpart, provides two possible acoustic cues, both of these cues are inaccessible to Malay-English bilinguals. Although the percentage for the correct identification of *beat* is slightly lower than that obtained for *bit* when *bit* was presented, the students were also confused with other words, as shown in *Fig. 6*.

Meanwhile, there was less confusion when *beat* was presented. Taken together, these results suggest that the vowel representation, that is operative in Malay-English bilinguals, is more likely to be closer to the high-front tense vowel. Hence, single-category assimilation in the form summarized in (4) can be concluded where L2 learners map L2 sounds onto its similar L1 counterpart.

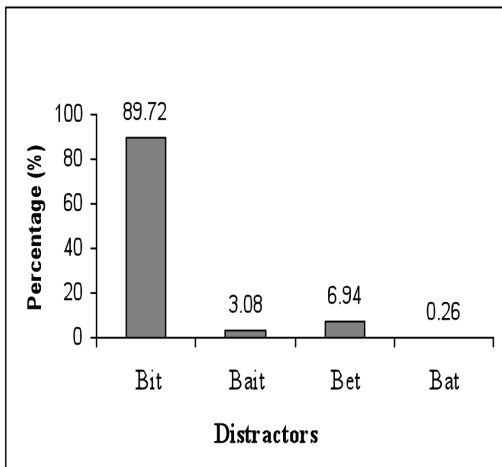
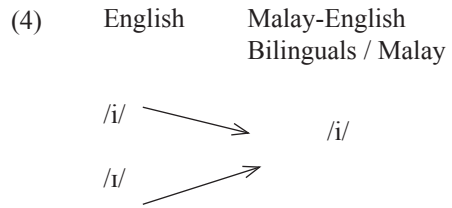


Fig. 5: Proportion of distraction for *beat*

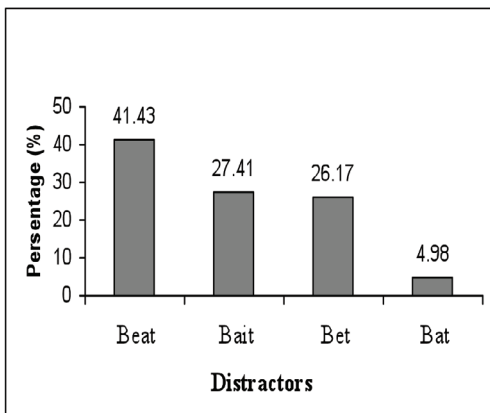


Fig. 6: Proportion of distraction for *bit*

A similar pattern of assimilation was also observed for *bet* and *bat*, as shown in *Figs. 7* and *8* below. The percentage of correct identification for *bat* is relatively higher compared to that for *bet*, while the proportion of distraction attributed to *bat* when *bet* was presented is also exceedingly high (81.9%). Thus, it can be concluded that the vowel representation that is operative in the Malay-English bilingual speaker is more likely to be the low-front vowel /æ/.

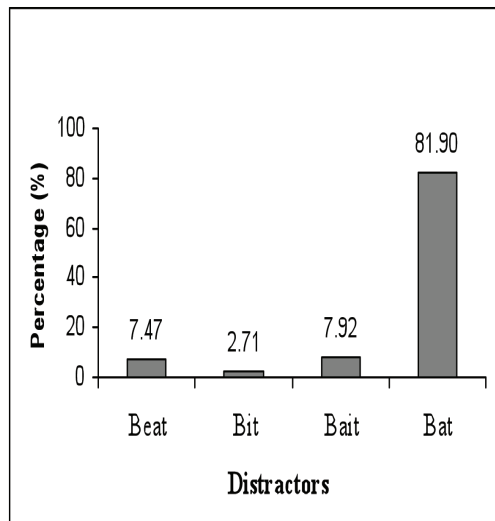


Fig. 7: Proportion of distraction for *bet*

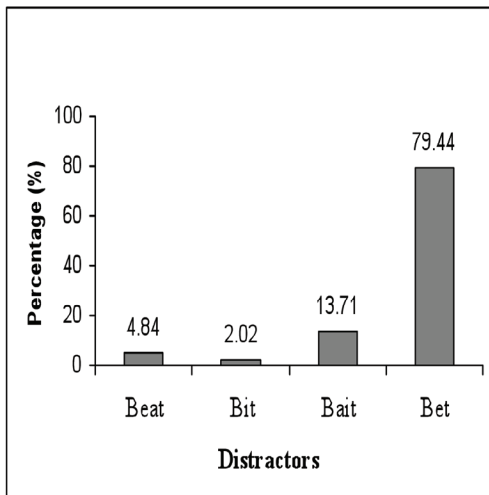
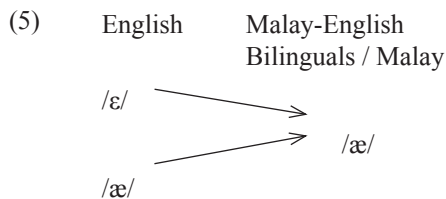


Fig. 8: Proportion of distraction for bat

The Malay language does not have a mid-front lax vowel. Taken together with the results of the identification task, the findings suggest that the vowel representation that is operative in the Malay-English bilingual is more likely to be the low-front vowel. Hence, the category assimilation in the form summarized in (5) can be concluded.



Unlike the earlier example (in 4) which could be attributed to the lack of tense-lax or length distinction in Malay, however, the assimilation of categories described in (5) presents an additional puzzle in understanding L1-effects on L2 vowel representation. Since /e/ and /ɛ/ are the tense-lax pairs in English, the assimilation of these two vowel categories is expected if the single-category assimilation is motivated by an absence of the tense-lax contrast in the L1. Furthermore, since the mid-front vowels are allophonic variants in

Malay, they should be more susceptible to single-category assimilation. The fact that the results show otherwise suggests that other factors may influence the process of single-category assimilation.

The mid-front tense vowel, /e/, is often phonetically realized as a diphthong. It could be the case that the phonetic cues of a diphthong are more salient and perceptible. This could also be the reason why the mid-front lax vowel undergoes category assimilation with the low-front lax vowel instead because both the categories are phonetically realized as monophthongs and may be considered closer in terms of their perceptual distance (Johnson, 2003).

The highest percentage of correct identification was observed for the mid-front tense vowel /e/ in *bait*. This was most likely attributed to direct mapping onto a similar category found in Malay, or to the salience of this particular vowel category, which is realized phonetically as a diphthong in many varieties of English. The analysis from the incorrect answers shown in Fig. 9 reveals that *bait* was sometimes confused with *bet*. This confusion may be attributed to the fact that [e] and [ɛ] are allophonic variants in Malay. For example, the word *gelek* 'to roll over' may be pronounced as [gelɛk] or [gelek] in Malay. However, it should be noted that the percentage of error was rather small, i.e. at about 4.21%, and may be regarded as negligible.

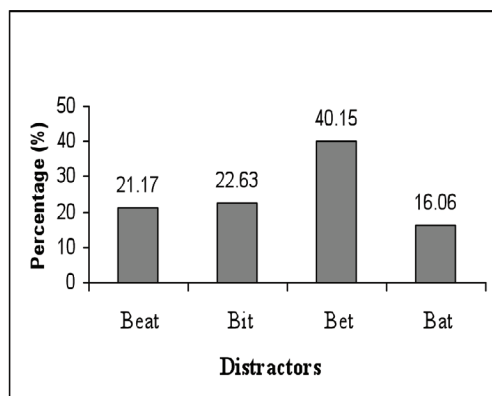
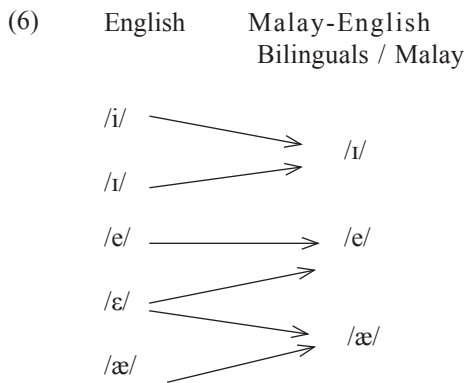


Fig. 9: Proportion of distraction for bait

In sum, it can be concluded that Malay-English bilinguals only have 3 distinctive categories of front vowels since there are two instances of single-category assimilations. The representation of English front vowels in Malay-English bilinguals can therefore be summarised in (6).



The English language proficiency of the subjects, as indicated by the results obtained in the Malaysian University English Test (MUET), ranges from Bands 2 through 5. Students with MUET band 2 were assigned to the weak group, while students with MUET bands 3 and 4 were assigned to the advanced group. Since there were only three subjects who had a MUET band 5 score, these subjects were removed from the statistical analysis.⁷ Fig. 10 shows the distribution of the scores for the two groups of students.

The one-sample Kolmogorov-Smirnov showed that normality could not be assumed for all categories of vowels. The non-parametric Mann-Whitney *U* analyses revealed that the performance of the weak or less proficient bilinguals (*n* = 16) was significantly different from the performance of the advanced bilinguals for only the mid-front tense vowel in *bait* (*n*= 33), *z* = -2.632, *p* < 0.05. The performance of the students in the identification experiment was not statistically significant between the weak and advanced bilinguals for all the other categories of vowels (*p* > 0.05), as shown in Table 2.

The analyses also show that the participants' level of English proficiency had little influence

on their performance, particularly for the vowels which were included in the single-category assimilation. The occurrence of the single-category assimilations of the English vowels in the mental representation of Malay-English bilinguals could possibly be generalized to the population of these speakers, regardless of their level of proficiency in English.

CONCLUSIONS

This study shows that the Malay-English bilinguals have only three categories of front vowels. The results obtained from this study are consistent with the literature on L2 speech perception and production (e.g. Flege, 1987; Best *et al.*, 2001; Flege *et al.*, 2003; MacKay *et al.*, 2001), where L2 vowels are mapped onto a representation similar to that available in their L1. In this study, the Malay-English bilinguals were found to have assimilated the categories of vowels that were not found in the vowel representation in Malay.

The findings of this study are also, to a great extent, consistent with the findings of the speech production studies conducted on the vowel space occupied by Malaysian English. Zuraidah, Pillai and Tang (2008) claim that there are 4 categories of the front vowels in Malaysian English: two high-front vowels, one mid-front and one low-front vowel, respectively (/i/, /ɪ/, /ɛ/ and /æ/). The mid-front tense vowel /e/ was not considered, possibly because it was categorised as a diphthong. With this vowel category removed, the identification experiment shows that Malay-English bilinguals are able to distinguish only two categories of the front vowels, instead of four.

Further studies should be conducted to include other bilingual groups in Malaysia to see if some subgroups could perceive the tense-lax distinction in English high-front and -back vowels, and to ascertain the number of categorical distinctions maintained by Malaysian English speakers. Further work should also be done to include the central and back vowels to provide a more comprehensive coverage of the Malay-English bilinguals' perceptiveness of English vowel categories.

Representation of English Front Vowels by Malay-English Bilinguals

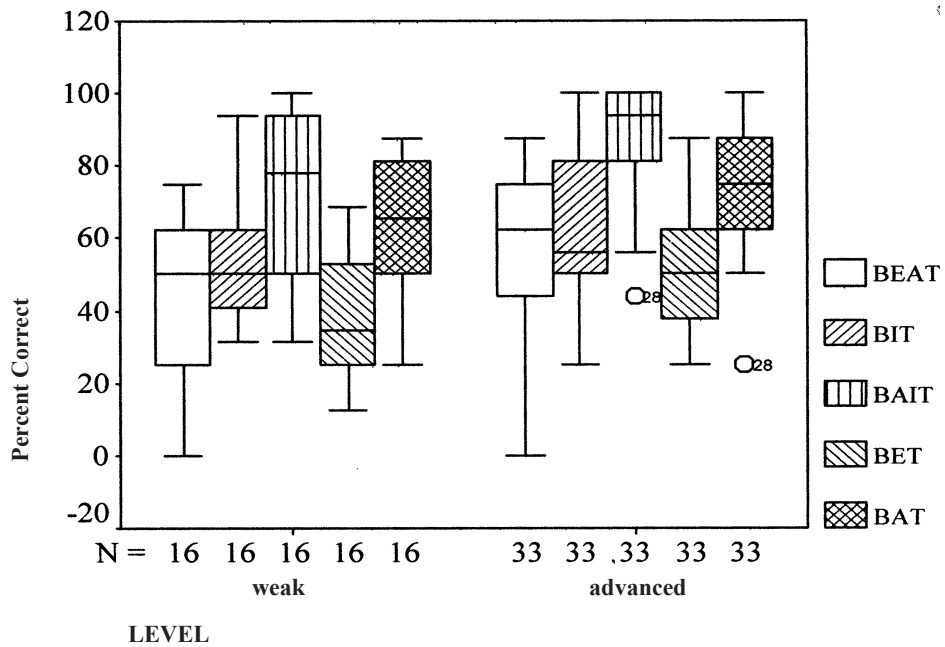


Fig. 10: Performance in vowel identification by proficiency level

TABLE 2
Proficiency level and identification of English front vowels

	Level	N	Mean rank	Sum of ranks	Mann-Whitney U	z	p
/i/	weak	16	19.69	315.00	179.000	-1.823	.068
	advanced	33	27.58	910.00			
/ɪ/	weak	16	20.34	325.50	189.500	-1.598	.110
	advanced	33	27.26	899.50			
/e/	weak	16	17.47	279.50	143.500	-2.632	.008*
	advanced	33	28.65	945.50			
/ɛ/	weak	16	19.38	310.00	174.000	-1.934	.053
	advanced	33	27.73	915.00			
/æ/	weak	16	20.06	321.00	185.000	-1.696	.090
	advanced	33	27.39	904.00			

*significant at 0.05

Nonetheless, the current study has established a link between the perceptual ability of Malay-English bilinguals, with the variation in the pronunciation of Malaysian speakers of English that is recorded in the literature (e.g. Baskaran, 2005; Zuraidah, Pillai and Tang, 2008; Pillai, 2008). The results suggest that the variations or 'pronunciation errors' among Malaysians may in fact not be 'errors', since bilingual speakers could not perceive a categorical difference in the first place. Therefore, any effort directed towards improving or correcting the pronunciation of Malay-English bilingual speakers, if necessary, will inevitably involve improving the speakers' ability to perceive categorical contrasts in the target language that are absent in their first language.

ENDNOTES

¹The mid-front tense vowel /e/ is often realized as the diphthong [eɪ] in some British and American varieties of English. According to Fromkin, Rodman and Hyams (2003), some English speakers diphthongise all front and back tense vowels, while others, particularly speakers in Ireland, produce them as monophthongs. With these variations in mind, we followed Fromkin, Rodman and Hyams (2003) in using /e/ to refer to the vowel in *bait*.

²We are aware of Nor Hashimah's (1998) assertion that the low vowel in Malay may be more accurately described as the unrounded low back vowel, /ɑ/. However, for the purpose of this study, the authors used the description provided in Nik Safiah *et al.* (2008).

³As indicated in footnote 1, the midfront tense vowel /e/ may be realised as the diphthong [eɪ], and for this reason, it is often not included in the vowel chart which focuses mainly on monophthongs. However, the authors included it in this study to enable comparison with the vowel categories in Malay. Note that the vowel phonemes from both the American and British varieties are also included in the same vowel chart. See Davenport and Hannahs (2005) for details on the differences in the vowel inventories of various English varieties.

⁴The AT&T demo programme does not specify which British or American varieties are modelled. For this reason, the authors also refer to these two varieties in a general manner.

⁵/e/ is realised as a diphthong in some varieties of English. Therefore, the formant values are characterised by directional movements. Since the formant values of this category are not reported in the literature, only the formant values for the generated vowel are provided in this paper.

⁶The inclusion of *bait* as a stimulus item in the identification experiment could also be justified in its role to help identify non-serious participants, although none was identified in this study. The results show that the participants have little problem in identifying *bait*. Therefore, serious participants should perform above chance level when *bait* is presented; while no difference is expected for this vowel and the other vowels for non-serious participants.

⁷Similar results were obtained even when these three subjects were included in the advance group.

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Mechanisms for Establishing a Research Culture at Language Institutions

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ABSTRACT

The Language Centre at Sultan Qaboos University is the academic unit that is responsible for teaching English. However, teaching English is only one of the three functions that it has. The other two functions are carrying out different types of language assessments and conducting research in the field of language instruction and acquisition. Underpinning the third function, which is conducting research, is the rationale that it is through research that educational institutions can come to an understanding of the various phenomena or situations that could emerge in language teaching contexts, and the factors that shape them. Based on this understanding, it is believed that it “will have a beneficial effect on language teaching and learning” (Borg, 2009, p. 1). The purpose of this paper is to report on the main findings and implications of a study that aimed at exploring the perceptions of the Language Centre teachers on research, its advantages and constraints, as well as their ideas regarding the ways in which ELT research and research culture can be promoted at their institution.

Keywords: ELT research, language institution, language teaching context, research awareness, research culture

INTRODUCTION: CONTEXT OF THE STUDY

The Language Centre (LC) at Sultan Qaboos University (SQU), Oman is an academic unit whose main objective is to prepare SQU students to meet the demands of higher education once they join their college credit courses.

The Language Centre offers intensive English language instruction for new students and credit English language instruction to support college courses. The centre also provides teaching of English at the postgraduate level, English for the university administrative and technical staff, English for the community and IELTS preparation courses. The centre teaches more than 5000 undergraduate students per semester, around 120 staff members, and 100 people from the community.

The centre has over 200 very well-qualified teachers who come from 29 different countries, hence deservingly earning the Language Centre the reputation of being the mini-UN in SQU. This colourful tapestry of people is one of the main assets of the Language Centre, as each and every individual brings to the centre the wealth of their cultural heritage and identities which are rooted in the norms of their parent societies. These teachers, despite their different backgrounds, are united by one profession, the teaching of English to non-native speakers of the language. This unity brings harmony to the institution and cultivates an atmosphere in which ideas are shared and communicated.

In addition to this tremendous asset in human resources, the LC has a Curriculum Development Unit that is responsible for

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developing print and electronic teaching materials as well as designing, reviewing, implementing, and revising curricula in the intensive program. The centre also has a Testing and Assessment Unit that is responsible for preparing and administering all SQU placement and exit testing. It is also responsible for carrying out all end-level exams in the intensive programme. The two units base much of their work on research, the product of which is sometimes published.

The Language Centre administration believes that continuous professional development is essential for the skill development of its staff. Therefore, there is a Professional Development Committee at the centre which organizes frequent seminars and workshops on different areas such as teaching, testing, materials design, development and writing. These professional development sessions are conducted by local and international experts. The most prominent teacher development event held at the centre is the annual Oman International English Language Teaching (ELT) Conference. This is a magnificent event that attracts around 1000 individuals from around the world. The LC publishes conference proceedings that contain papers based on the best presentation featured at the conference. Since its inception in 2000, the International Oman ELT Conference has been a great forum for the exchange of ideas about English language instruction among colleagues from the region and from the international arena.

The administration of the Language Centre believes that research encourages teachers to be observant, analytical and reflective. It affords them additional insights into the process of teaching and learning a language. This heightened awareness is believed to positively influence their classroom practices and methods of teaching. Recognizing the crucial importance of research, the Language Centre has made it its objective to establish a research culture within its boundaries and to foster it even beyond. In order to achieve this, it has established a Research Committee that has a clear vision, a clear mission, and clear objectives. The primary functions of the committee include facilitating research

within the centre and fostering an atmosphere conducive to research. The committee meets frequently to discuss research matters within the centre and to determine how to advance the cause of research among its staff. Recently, the committee organized a symposium that aimed at promoting research in ELT. The symposium was attended by around 400 ELT professionals from Oman.

Therefore, the academic faculty members at the Language Centre are encouraged to carry out research projects in various aspects of the English language teaching and learning, testing, curriculum and methodology, and participate in a range of national and international conferences, symposia and professional journals. Hence, a great number of the members of the Language Centre are keen to do research in the different fields of ELT. They are aware of the advantages to be reaped from doing research and many of them read ELT journals or journals of related fields. Teachers with similar research interests have started forming teams that meet regularly to discuss their research studies, divide up roles, and review their progress. Their active research helps to enhance the academic reputation of the Language Centre and SQU and inform the teaching and testing practices. The vision of the Language Centre administration regarding research, the support of the research committee, and the involvement of the teachers in research have resulted in the gradual but noticeable growth in research conducted at the Language Centre, and this promises a brighter future for research and publication within it.

MATERIALS AND METHODS

This study was conducted with the aim of exploring the perceptions of ELT teachers about research in the field of English language teaching. It also sought to find out what these teachers perceived as the advantages and constraints of such research. In addition, the study also attempted to elicit these teachers' ideas regarding how to promote ELT research in their institution.

For this purpose, a qualitative survey was designed by the authors. The survey contained

eight open-ended questions (Appendix 1). The authors' immediate concern was to obtain the views of the teachers about research in general and ELT research in particular, its characteristics, benefits, advantages, and constraints. The questions of the survey also elicited the teachers' vision about how to further promote research in the Language Centre.

Given the current proliferation of online research instruments and potential values of web-based research strategies and approaches (Zhang, Davies, Yokoyama and Miyadera, 2009), the online version of the survey was created and posted to all the members of the LC faculty.

Twenty teachers of the Language Centre voluntarily responded to the call and answered the survey questions. One main limitation of the study was that only 10% of the teachers participated in it. Since participation was voluntary, only those who were truly committed to research responded to the call and answered the survey questions.

The small number reflects a problem that actually faced by the Language Centre administration as it is often the case that the staff does not respond when input is sought from them regarding the issues that are critical for the development of the LC. Quite often, teachers pronounce their concerns verbally but when they are requested to volunteer in the context of research, they shy away from doing so. However, the LC administration is keen to involve all the teachers and will continue to raise these teachers' awareness regarding the importance of voicing out their opinions and views for the well-being and development of the Language Centre.

RESULTS AND DISCUSSION

As mentioned earlier, teachers were given a list of open-ended questions concerning ELT research with eight items in it. The teachers described research as a methodical, scientific, systematic, directed, and deliberate investigation to gather data about a certain phenomenon, to solve a certain problem or to learn more about a certain phenomenon. According to them,

research should fill a gap in knowledge for the benefit of humanity. It is a process of enquiry into a specific question, or into one's concerns. The teachers' definitions reflect an awareness of what research really means and involves. These definitions are similar in nature as to how Research is defined in the TESOL Position Statement on Research and Policy (2005). The statement states that research "refers to a spirited inquiry and systematic investigation that contributes to the knowledge base of a field."

To the teachers who responded to the questions of the survey, ELT research stems from the very basis of human nature which has at its core the need to communicate and to improve this communication with the purpose of creating and sharing meaning among different individuals who possess different languages and cultural backgrounds. In the opinion of these teachers, language acquisition is a very complex process and so is a fertile field for on-going research. However, this research falls under the umbrella of social sciences or humanities and thus, it is quite different from the research in the fields of the natural sciences, where findings are based on facts and are conclusive if the methodology followed is flawless. In ELT research, we can observe, survey, and interview. We can do our best to arrive at the right conclusions, but different people might glean different things from the gathered information.

It is evident, that there are many factors involved in language learning and teaching; factors that are related to the learner, to the teacher, as well as the factors are related to the context and learning situation, and factors that are related to textbooks and resources. Within each of these factors are numerous other elements that influence the instructional process, and thus have a bearing on research findings and conclusions.

In the words of one Language Centre teacher, "ELT often deals with issues that can be dynamic and sometimes are difficult to grasp, with the context (social, historical, political, etc) of the study assuming more importance than in many other fields."

In the opinion of another teacher, "ELT research is interdisciplinary and insights from

various fields such as psychology, management, business, education, anthropology make ELT research richer and more insightful unlike research in other fields.”

A third LC teacher addressed the difference between ELT research and research in other fields, quite emphatically, as follows:

“One of the main distinctions is that ELT has no overarching theory of communication. We can point to Chomsky’s theory of deep structure and universal grammar; Skinner’s verbal behaviour theory; Piaget’s language acquisition theory; Candlin and Widdowson’s communicative language theory; Krashen’s language acquisition theory; cognitive theory; speech act theory; etc. There are many separate theories about different aspects of communication. Compare this situation with that of other fields: Physics has quantum mechanics, Biology has evolution; Geography has plate tectonics. In most cases, there are comprehensive, unifying theories which overarch whole disciplines. This is not the case with EFL. Until EFL has a unifying principle, or even competing unifying principles, there will always be wildly different opinions about all aspects of EFL”.

All the twenty teachers who participated in the study agreed that ELT research is absolutely necessary in arriving at a better understanding of the nature of language learning and teaching. This understanding is, in turn, deemed essential in examining old theories, approaches, perceptions, and beliefs concerning language instruction. One Language Centre teacher noted:

“The advantage of ELT research is that it opens “the rules” of teaching to new ideas. As brain science claims, novelty helps us learn. So, just by experimenting with new techniques or applying the ideas of new research we are waking up the minds of students”.

The teacher further elaborated on her personal experiences and mentioned that the research gave her more than her own intuition to validate the use of these new practices. Another teacher asserted that “by engaging in research we can: find solutions to problems we face in our teaching; find ways of improving our teaching

skills; understand more how our students think and thus find ways to motivate them. Generally we can discover new ways of approaching our teaching.”

Thinking more broadly and deeply about the advantages of ELT research, a third teacher noted that:

“The advantages of engaging in ELT research include being able to gain a greater understanding of what might at first appear a troubling area or topic and learning more about students and your own teaching practice. But I think perhaps the biggest advantage is being able to place these in a much broader field, drawing links between the issues of the immediate classroom to what other researchers-practitioners have also done, and thus being able to take a step back from the immediate classroom concerns and place them in a broader (and hopefully more enlightening) context”.

In the opinion of the teachers who participated in the study, conducting research in the ELT field boosts self-confidence about one’s classroom practices in the knowledge that these are founded upon solid ground of research findings. ELT research transforms the teacher from a mere imparter of knowledge into a reflective person who thinks critically about his or her practices. This, in the words of another teacher, “can enable him/her to contribute to the task of creating new perspectives and solutions to improve ELT”. It can also “help to keep him/her mentally alert as he/she accepts the challenges that may come from other professionals who may have other points of view.”

Although all the teachers agreed on the advantages of ELT research, they did also mention some disadvantages. These were related, in the most part, to the time-consuming nature of research (workload, job responsibilities, very little time left for conducting research or documenting it) and the complexity of research (as there are often many grey areas so results are not conclusive unless found true using representative samples of individuals under various conditions or under controlled conditions depending on the objectives of the research).

To illustrate the disadvantages, one teacher explained,

“I think the main disadvantage is the amount of time genuine and thorough research requires. It is not only the amount of time needed to read widely in an area, analyze the ideas, develop research methodology etc., but also the time needed to gain approval for the research, have everything vetted to ensure it meets the required ethical and practical standards etc. All this has to be balanced against the concerns of preparing for and delivering effective classes, marking, student consultation etc, which may mean engagement in ELT research, actually makes them less effective instructors (at least) in the short term”.

The teachers who participated in the study are apparently aware that as ELT teachers, their primary roles are to deliver effective lessons to their students and to be available to help and guide these students at all times. Similar views have been described in the literature. For example, Hatton and Smith (1996) contended that teaching is mainly understood as immediate and pragmatic action. Because they are conscientious teachers, they stress the importance of achieving a balance between teaching and doing research. As one teacher put it very clearly:

“The primary role of an EFL teacher is to teach. The pendulum should not swing too far so that the person spends too much time researching and not enough on the primary role. A balance needs to be kept. There is also a distinction between academic research and action research. The latter takes place in the classroom and may even be small-scale. Ideally it should be occurring on a regular basis and every teacher should perhaps be involved in some way with action research. For example, a teacher may want to test which method works best with a group of students, or which types of material create the most interest. Academic research, on the other hand, will not have the same immediate benefit to students that action research has. Its benefits may not even be obvious. A good teacher may not make a

good academic researcher. Similarly, a good researcher may not make a good teacher. Perhaps some research needs to be done on how frequently these two abilities are found in the same person? Placing too much emphasis (and kudos) on academic research could have a detrimental effect on the LC, which is after all a language teaching operation”.

When asked about the role that research has played in their lives as professionals, many participants said that research shaped their beliefs regarding teaching and their practices inside the classroom. One teacher reflected that she found research could support practices she finds intuitively helpful. She later continued on saying:

“Also, it helps look into non-linguistic ways of improving my teaching and my own learning (as in the case of educational psychology or neuroscience research). I find that sharing some of this information with students helps them to attempt unfamiliar practices. Also, while I was working on some projects here at the LC, research helped to inform certain methodological choices.”

In the opinion of these teachers, good quality ELT research - whether qualitative or quantitative - is situated in teaching practice, addressing or targeting an important ELT problem or issue of concern to either the teacher or the students, or to both. It should ask questions guilelessly without knowing the answers in advance, and should be reliable, valid, purposeful, practical, well-designed, and organized.

Among the sources of published research that the twenty teachers reported using are journals of a variety of origins: the *ELT Journal*, *ERIC Digests*, *Ebraries*, the *LC Forum*, the *Language Testing journal*, *TESOL Quarterly*, *Teaching English as a Foreign language System*, *Educational Technology*, *BBC research site*, *Journal of Educational Technology* *The Language Teacher on line*, *Modern English Teacher*, *Articles LC ELT Conference Proceedings*, *Asian Journal of ELT*, the *International Review of Applied Linguistics*, *World Englishes*, *Journal*

of Multilingual and Multicultural Development, TESOLIslamia, Language Testing, Assessing Writing, Annual Review of Applied Linguistics, Language Learning, English for Specific Purposes, Journal of Second Language Writing, and the Internet TESL Journal.

The twenty teachers who participated in the study agreed that the Language Centre of SQU is moving forward in terms of its support for research. It is working hard towards achieving its objective of establishing a solid research culture. Another teacher had the opinion that the Language Centre is “buzzing with wonderful ideas and initiatives...the provision of frequent seminars and presentations in all areas of ELT is certainly stimulating interest in research amongst LC instructors.”

However, there is still much for the centre to do to establish, develop and foster a research culture among its staff. Some of the survey participants suggested allocating release hours for research. Others suggested more workshops, seminars and talks by prominent researchers in the field, and one advocated the establishment of a “virtual research” environment to encourage more on-line reading and discussions of important research findings and/or articles.

CONCLUSIONS

As stated in the Charter of Sultan Qaboos University, one of the university’s objectives is to uphold scientific research as the most effective tool in establishing accurate facts, problem solving and the prediction of social patterns as well as undertaking research in the fields of technology in relation to the Omani Society, in particular, and others, in general, to enhance the intellectual capabilities and quality of life of mankind as a whole and of the Omani society in particular. A similar objective, that which is more precise and worded regarding the field of language teaching and teaching, was proposed by the TESOL Position Statement on Research and Policy (2005). This statement says that research has the potential to help English

language teaching professionals improve the processes, outcomes and conditions for language teaching, learning and assessment.

In order to fully address this potential and to further foster a research culture in the Language Centre, a series of initiatives are deemed necessary. Change-bringing mechanisms should be aimed at both highlighting the advantages of research in language institutions and overcoming the personal and institutional constraints. In the same vein, to fulfil its third function of conducting research- as per Sultan Qaboos University Charter, and to take the lead in promoting ELT research within the Language Centre and in Oman, it is important for the Language Centre to take the initiative to:

- raise awareness about the potential for ELT research in Oman,
- promote and sustain good quality research in ELT in Oman,
- show how research in ELT can raise the quality of teaching and learning,
- encourage discussion among professional interested in research in the different fields of ELT,
- foster communication and cooperation between ELT providers in the private and public sectors in the area of ELT research,
- present and share research practices and findings in the local, national and international communities,
- to publicize and make research available to all members of the Language Centre faculty,
- collaborate with international journals to acquaint Language Centre staff with venues that could publish their research,
- invite reputed scholars from the field of ELT research to deliver workshops and lectures on how to conduct research studies and publish their findings,
- hold conferences and symposia focused on research to foster professional and academic

communication between international and local experts and practitioners in the field of ELT research,

- encourage members of the Language Centre faculty to document their practices and get published in ELT local, national and international journals.

Publishing will definitely help other teachers of the Language Centre benefit from the research, motivate those teachers who are reluctant to carry research and indisputably involve the teachers of the Language Centre personally, intellectually and academically lead to enhancing their job satisfaction, fostering their self-esteem and empowering them.

To facilitate successful implementation of the research function, the Language Centre aims to continue with its variety of activities (international conferences, research symposia, workshops, presentations, initiated action research, professional development sessions). It is also about to expand the traditional scope of activities to allow the members of the faculty to have more access to international ELT associations, organizations and journals through the portal of Sultan Qaboos University, web-page of the Language Centre and provided links.

It is envisaged that if the Language Centre succeeds in delivering the above plans, then, it would put in place solid mechanisms for establishing a research culture within the Language Centre and in Oman.

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APPENDIX 1

Survey Questions

1. How do you define research?
2. What distinguishes ELT research from research in other fields?
3. How can engaging in ELT research benefit the ELT professional? What are the advantages?
4. Can you think of any disadvantages concerning research in ELT?
5. What role does research play in your life as a professional ELT specialist?
6. How can research be promoted at the LC?
7. What are the characteristics of good quality research in ELT?
8. How often do you read published research in ELT? When do you do that? What journals do you often read?

Competitive Anxiety Level before and during Competition among Malaysian Athletes

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ABSTRACT

Anxiety is recognized as one of the main factors that reduces athletes' performance in sports. In many research reviews, researchers have found that high levels of anxiety can have a deteriorating effect on athletes' or teams' performance. To date, however, there has been no attempt to examine competitive anxiety level as influenced by gender, levels of skills, and performance. The main aim of the study was to describe and compare the anxiety differences before and during competition among different categories of skills of athletes and genders. Data were collected from 902 athletes using a 27 item Competitive State Anxiety Inventory-2. The results showed that national level and male athletes obtained the lowest score on competitive state anxiety. Based on the current results, it is recommended that sport psychologists, sport counsellors, and coaches in Malaysia use the findings to design appropriate training programmes to help athletes acquire suitable coping strategies so as to reduce their state anxiety levels and enhance their performance.

Keywords: Anxiety, before competition, categories of skill athletes, competition, during competition, level of anxiety, performance, state anxiety

INTRODUCTION

Most psychologists believe that the highest level of competitive anxiety will deteriorate athletes' performance in sport (Martens, Vealey and Burton, 1990; Cox, Qiu and Liu, 1993; Weinberg and Gould, 1999; LeUnes and Nation 2002; Ortiz, 2006). On the contrary, a lower level of anxiety was found to have enhanced the performance of athletes (Martens *et al.*, 1990; Krane and Williams, 1994). In sports, higher levels of anxiety before any competition can deteriorate performance (Hardy, 1999). According to Weinberg and Gould (1999), coaches fail to predict the accurate level of anxiety of athletes.

Anxiety consists of two subcomponents, namely cognitive and somatic anxiety, which influence performance before and during competition (Weinberg and Gould, 1999; Lazarus, 1991; Anshel, 2003; Martens *et al.*, 1990; Jarvis, 2002). Meanwhile, cognitive is the mental component, which is characterized by negative expectations about success or self-evaluation, negative self-talk, worry about performance, images of failure, inability to concentrate, and disrupted attention (Martens *et al.*, 1990; Jarvis, 2002). The somatic is the physiological element which is related to autonomic arousals, and negative symptoms such as feelings of nervousness, high blood

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pressure, dry throat, muscular tension, rapid heart rate, sweaty palms, and butterflies in the stomach (Martens *et al.*, 1990; Jarvis, 2002).

The level of anxiety has the tendency to change during competition by becoming higher or lower (Weinberg, 1989; Weinberg and Gould, 1999; Cashmore, 2002; O'Neil and Abedi, 1992; O'Neil, Baker and Matsura, 1992) because the cognitive and somatic components change according to time and situation (Caruso, Dziewaltowski, Gill and McElroy, 1990).

Researchers have reported that over 50 percent of consultations among athletes at Olympic Games or sport events are related to stress or anxiety problems (Murphy, 1988). Anxiety is a negative emotion that affects perceptions in sport competitions, and this leads to majority of athletes to consider anxiety as debilitating towards performance, which may result in a decrease in performance (Weinberg and Gould, 1999; Raglin and Hanin, 2002). Furthermore, majority of the athletes who needed consultation were those who were suffering from anxiety, before and during sport events (Bull, 2000). If athletes fail to control their anxiety, it will deteriorate their performance in sports (Martens *et al.*, 1990). Anxiety is the main factor of decreased performance levels and drop out of athletes from sports (Pierce, 1980; Martens *et al.*, 1990; LeUnes and Nation, 2002). Furthermore, aggression in sports is also related to a higher level of anxiety (Berkowitz, 1990). Athletes also use drugs to reduce anxiety for enhanced performance (Weinberg and Gould, 1999).

According to Hanton, O'Brien and Mellalieu (2003), the level of anxiety before and during competition is not clear because of the contradictory findings. Different athletes have reported different levels of anxiety, i.e. from high to low (Raglin and Hanin, 2000). Meanwhile, the findings by Males and Kerr (1996) showed that the level of anxiety increased gradually when the sport event was nearer. This is related with the tendency to have negative thinking which surrounds the mind when the

sport competition event is coming nearer (Elgin, 2006).

Beside that, the skills of athletes have been found to influence athletes' levels of anxiety as well (Hembree, 1988; Heckhausen, 1990; Jones, 1995). Athletes having different levels of skills have been found to report different levels of anxiety before and during competitions (Mahoney and Meyers, 1989; Cox *et al.*, 1993). Elite or athletes with higher skill level have been found to report low levels of anxiety (Sade, Bar-Eli, Bresler and Tenenbaum, 1990). On the contrary, Perry and Williams (1998) found no significance on the levels of anxiety between athletes of high, medium and low skills.

A significant number of research in sport psychology showed that female athletes reported higher anxiety levels than males (Montgomery and Morris, 1994; Deutch, 1999; Thatcher, Thatcher and Dorling, 2004; Barksy, Peekna and Borus, 2001; Jones and Cale, 1989; Cerin, Szabo, Hunt and Williams, 2001; Kessler, McGonagle, Zhao, Nelson, Hughes, Eshleman, Wittchen and Kendler, 1994; Cartoni, Minganti and Zelli, 2005; Cartoni, Minganti and Zelli, 2005; Scanlan and Passer, 1979; Wark and Wittig, 1979; Jones and Swain, 1992; Krane and Williams, 1994; Thuot, Kavouras and Kenefick, 1998). In addition, a number of research has shown that there is no significant difference in the level of anxiety between male and female athletes (Hammermeister and Burton, 2001; Seeley, Storey, Wagner, Walker and Watts, 2005; Ramella-DeLuca, 2003; Ampongan, 2001). Therefore, this research can also determine the level of anxiety between genders.

So far, research in sport has focused only on the categories of elite or successful athletes, but ignored the other categories of less successful athletes (Krane, 1995). Until the present day in Malaysia, research that compares the categories of athletes based on their skills is very rare. Therefore, this particular research focused on athletes having different skill categories, like those who have represented at the national, state, district, university and school levels. Beside

that, the levels of Malaysian athletes' anxiety before and during competition are yet to be identified through research. In addition, research on gender differences in terms of their anxiety levels before competition should not be ignored (Thatcher *et al.*, 2004).

AIM

The purpose of this research was to examine the differences in the anxiety levels, before and during competition. For this purpose, the competitive anxiety levels were compared among the athletes having different skill categories or representation in sports (i.e. national, state, district, university, and school levels) and gender. In other words, this research was concerned with the measurement of the anxiety levels among the athletes of different skill levels and gender.

It is important to note that research conducted on athletes with different levels of skill is still very rare in Malaysia. In fact, most of the research conducted in sport psychology is more concerned with male athletes than their female counterpart (Cox, 2007) because sport is considered to be a man's world (Burstyn, 1999; Hargreaves, 1997).

SAMPLE

The sample consisted of 902 athletes, comprising of national athletes (N=53), state athletes (N=395), district athletes (N=120), university athletes (N=211), and school athletes (N= 123). In term of gender, the participants (N = 908)

comprised of male (n = 502) and female (n = 406) athletes. The sample was drawn from the athletes who competed in three big sport events of Malaysia, MASUM (Universities Sports Competition), MSSM (Schools Sport Competition) and *Sukan Olimpik Muda* (Young Olympic Athletes Competition).

MATERIALS AND METHODS

The instrument used for the study was the Competitive State Anxiety Inventory-2 which consisted of 27 items. The Competitive State Anxiety Inventory - 2 included both the cognitive and somatic components. The CSAI-2 was administered twice, i.e. before and during the match to examine the level of anxiety prior to and during the competition.

RESULTS

Gender

The independent *t*-test presented in Table 1 shows that the level of anxiety among the female athletes was higher (\bar{x} =45.6423) than that of the males (\bar{x} =44.7792) prior to the competitions. In other words, the male athletes showed significantly less anxiety than the females prior to the competition, i.e. $t(6.607)$, $p<.0.01$. A similar situation was also found to occur during the competition, whereby females athletes were higher in term of their level of anxiety (\bar{x} =45.4919) than that of the males (\bar{x} =41.7352). On the contrary, the male athletes showed significantly less anxiety than the females during the competition, i.e. $t(5.946)$, $p<.0.01$.

TABLE 1
Independent t test of gender on the Competitive Anxiety Level

	Gender	Before competition			During competition		
		Mean	<i>t</i> -test	p-Value	Mean	<i>t</i> -test	p-Value
Level of competitive anxiety	Female	45.6423	6.607**	0.000	45.4919	5.946**	0.000
	Male	44.7792			41.7352		

** $p<.0.01$

Categories of Athletes

Table 2 shows the mean scores for the anxiety among the athletes of different skills, prior to their competitions ($F(4,843) = 15.102, p < .01$), and during the competition, $F(4,815) = 7.992, p < .01$. Apparently, significant differences emerged for the athletes having different skills before and during competition. Overall, the mean score obtained for the national athletes was lower than those in other categories, both prior and during the competitions.

This result was confirmed using the Post-Hoc Tukey Test, i.e. the national athletes showed lower anxiety levels than those of the school ($k < .05$) and university ($k < .05$) representative athletes prior to the competitions. However, there was no significant difference between the levels of anxiety among the state and district athletes. This confirmed that the school and university athletes exhibited higher levels of anxiety than those in the other categories.

Meanwhile, the Post-Hoc Tukey Test during the competition confirmed that the levels of anxiety among the national athletes were much lower than those of the state athletes, university and school, but were not much different from the district level athletes.

Performance

Table 3 shows that the levels of athletes' anxiety differed significantly according to the levels of performance, for both prior to $F(2,824) = 18.470$,

and during the competitions $k < .01, F(2,794) = 9.432, k < .01$. The results showed that the athletes who exhibited higher levels of anxiety showed low levels of performance in sports, while those who exhibited lower anxiety level showed higher levels of performance in sport, both before and during the competition. This result was confirmed by the Post Hoc Tukey test before and during the competition, i.e. the athletes who exhibited the highest level of competitive anxiety performed very low in sports than those who exhibited medium or lower levels of anxiety. Moreover, the athletes who exhibited lower levels of competitive anxiety were found to perform higher in sports than those who were from the highest and medium levels of anxiety.

DISCUSSION

Gender

The results showed that the female athletes' level of anxiety, before and during the competitions, was higher than that of the males. This result is supported by the findings of many other researchers such as Scanlan and Passer (1979), Wark and Wittig (1979), Jones and Cale (1989), Abel and Larkin (1990), Jones and Swain (1992), Kessler *et al.* (1994), Krane and Williams (1994), Cerin *et al.* (2001), and Cartoni *et al.* (2005) who also found that the levels of anxiety among the female athletes was higher than that of their male counterparts.

TABLE 2
One way ANOVA of competitive anxiety level based on the categories of athletes

Categories of athletes	Before competition			During competition		
	Mean	F-value	p-value	Mean	F-value	p-value
National	39.3600			38.5600		
State	42.0111			42.7528		
District	42.2091	15.102**	0.000	42.2170	7.992**	0.000
University	46.3462			45.5279		
School	46.0000			44.9279		

**p < 0.01

TABLE 3
Level of anxiety based on the performance in sports

Performance	Before the competition			During the competition		
	Mean	F-value	p-value	Mean	F-value	p-value
High	41.2605	18.470**	0.000	41.6134	9.432**	0.000
Medium	43.8514			43.6945		
Low	48.0141			46.8235		

** p< 0.01

According to Montgomery and Morris (1994) and Lewinsohn, Gotlib, Lewinsohn, Seeley and Allen (1998), female athletes generally exhibit higher anxiety than males because of the biological factors and their roles in the society. For example, the society can accept if females show fear, nervousness, and worry but not the males (Montgomery and Morris, 1994). In other words, males have been trained to control their emotions as compared to females who tend to exhibit their emotions (Jones and Cale, 1989).

Categories of Athletes

Overall, the result showed that before and during competition, the athletes representing their universities and schools exhibited higher anxiety levels than those in the other categories of state and district, whereas national athletes showed the lowest levels of anxiety. In Malaysia, no research involving the five categories of skills has been conducted so far; therefore, this research has failed to compare these with the findings of previous research. However, many studies have shown that elite athletes exhibit the lowest level of competitive anxiety (Fenz and Epstein, 1969; Sade *et al.*, 1990, LeUnes and Nation, 2002, Bridges and Knight, 2000; Smith and Bar-Eli, 2007).

According to Mahoney and Meyers (1989) and Zajonc (in Lloyd and Mayes 1999), athletes of different levels of skill show different levels of competitive anxiety. On the other hand, athletes with low levels of skill, like those whose highest achievement is taking part in

school or university competitions, normally experience higher levels of competitive anxiety. Meanwhile, those athletes whose highest achievement is taking part in national or state level competitions, experienced low levels of anxiety. It is very common that low level skilled athletes experience higher levels of competitive anxiety (Wann 1997). Besides that research of Meyers *et al.* (1979), Hackfort and Spielberger (1989), LeUnes and Nation (2002) showed that elite athletes used coping strategies to reduce competitive anxiety.

Performance

The results also showed that prior to and during the competition, the athletes in the categories of high levels of competitive anxiety experienced the lowest performance in sports, whereas those with lower levels of competitive anxiety experienced the highest levels of performance. These findings are supported by the research of Martens *et al.* (1990), Jones and Swain (1992), Cox *et al.* (1993), Fujita and Ichimura (1993), Jones, Swain and Hardy (1993), Rotella and Lerner (1993), Jones and Swain (1995), Lane, Terry and Karagerorghis (1995), Lane, Terry and Karagerorghis (1995), Wiggins (1998), Weinberg and Gould (1999), Bull (2000), Cox (2007), Leunes and Nation (2002), Cartoni *et al.* (2005), and Ortiz (2006). On the contrary, higher levels of anxiety are related to lower performance in sports (Williams and Jenkins, 1986; Leunes and Nation, 2002). In other words, victory or defeat in sports is determined by the athletes' levels of anxiety in sports.

CONCLUSIONS

The present study has certain limitations that need to be taken into account when considering the study and its contributions. Since the level of anxiety after the competition is not related to the athletes' performance, this study merely focused on the level of anxiety before and during the competitions only.

The results of the present study also revealed that the athletes who exhibited higher levels of anxiety showed lower levels of sport performance. This confirmed the fact that the high level of anxiety was the main barrier that inhibited the athletes from gaining higher achievements in sports. The results also pointed out that female athletes and lower skilled athletes experienced higher levels of anxiety.

This research also determined the level of anxiety of different categories of athletes according to their skills. Coaches, sport psychologists, and counsellors can make use of the finding of the present study in providing appropriate coping strategies for school and university levels and certain skills and female athletes who showed the highest level of anxiety so as to reduce their anxiety level before and during the competition.

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Codeswitching in Communication: A Sociolinguistic Study of Malaysian Secondary School Students

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ABSTRACT

Codeswitching is a common phenomenon in a multilingual society like Malaysia. Furthermore, the language policy of the Malaysian government has made it mandatory for the students to learn both in bahasa melayu and English at their primary school level. The Indian and Chinese students acquired their respective mother tongues, namely Tamil and Mandarin, besides the two compulsory languages, (bahasa Melayu and English). This study was conducted at four secondary schools situated in the Klang Valley, in which one school was chosen from an urban setting, two from suburban, and one from a rural area. Twenty samples were selected of which twelve were Indian students, four Malays, and four Chinese. The samples were given two topics for discussion and their conversations were recorded and transcribed. In addition, a questionnaire was administered to determine the respondents' demographic details and their language choice at home. The findings indicated that codeswitching that occurs from bahasa Melayu to English, Tamil or Chinese to English or vice versa during conversations is more habitual by nature. Respondents from the average economic and educational category were found to have used both English and their mother tongue as their matrix language. However, the respondents from the lower economic and educational category used their mother tongue as the dominant language or matrix language. Similarly, when the same ethnic group converse, their mother tongue becomes the domain language, with English and bahasa Melayu as the embedded languages.

Keywords: Codeswitching, matrix language, embedded language, multilingual society

INTRODUCTION

Malaysia is a multilingual nation and it comprises of Malays and natives (62%), Chinese (27%), Indians (8%), and the remaining 3% of other races. This mix of ethnicities contributes towards the variation in language use and cultural practices. Due to various factors, such as the numerical strength of the dominant Malay community, their language, political support for the Malay language, culture and above all, the administrative and educational dominance of the Malay language in every respect, the Malay language seems to have a significant control over the weaker races which include all the minority

communities living in Malaysia (Asmah, 1992). Apart from the above socio-political reasons, another factor which contributes to switching codes between Malay and English by the Tamil speakers is the phenomenon of globalization. Globalization is the result of advancement of science and technology at the world level. In other words, the unequivocal advancement in technology is often initiated by the developed nations. Meanwhile, technical advancement and obtaining up-to-date knowledge in technology automatically contribute economic power and bring in job opportunities. This cause and effect reaction often makes the developing or under-

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developed nations to obtain technical knowledge as early as possible for the reasons mentioned above. It is needless to say that the process of globalization is always initiated by the developed nations. Another hard truth is that in the modern world scenario, English is the language through which one can have easy access to the needed technological knowledge and meet at ease the process of globalization (Jacobson, 2004). Subsequently, most of the countries in the world are interested in incorporating English in their educational curricula. Malaysia is also not an exception to this. Another sociolinguistic behaviour found among the language users is that everybody, irrespective of their socio-economic and educational status, wants to be familiar with English. This linguistic behaviour of the interlocutors has made English a prestigious language of the world, including in Malaysia. Language use in the Malaysian situation needs to be viewed with reference to the general language policy of the Malaysian government. As per the language policy of Malaysia, it is mandatory that the Malaysian students have to learn both bahasa Melayu and English starting from their primary school level. Furthermore, the Indian and Chinese students will also acquire their respective mother tongues, namely Tamil and Mandarin, besides the two compulsory languages, (bahasa Melayu and English). Thus, this enables the multilingual students to code switch with ease and confidence during communication (Paramasivam, 2006).

In general, codeswitching (CS) can be defined as switching from one language code to another during a single communicative event. It also comprises the alternation between one or more languages or dialects in the middle of a discourse between people who have more than one language in common. Sometimes, the switch takes place after a few sentences and at other times after a single phrase. Those who codeswitch may not even be aware of their behaviour and when asked will deny that they resorted to such a practice in their speech (Jacobson, 2001).

With this background, if we look into the phenomenon of CS among the students of

Malaysia, three types of CS patterns have been identified. These are firstly, those Malaysian students who use bahasa Melayu as their dominant language with embedded English words in their discourse. Secondly, those interlocutors who use English as their dominant language with embedded Bahasa Melayu words in their speech and finally, the students who embed English or bahasa Melayu in their mother tongue (L1), such as Tamil or Mandarin in their discourse. The above mentioned communicative patterns are observed in most of the situations undertaken in the present study.

REVIEW OF RELATED LITERATURE

While discussing about CS taking place in different sociolinguistic and multiethnic situations, various researchers have defined the phenomenon of CS with reference to the concerned situation in which the study was undertaken. For instance, Zaitul Azma Zainon Hamzah (2006) suggests that pragmatic research focuses on the relationships that exist between language structures and the mannerisms of the interlocutors. For example, in an informal conversation among a group of multiracial students, their conversations are dependent on the context and the outcome, as well as how the listeners process the information or message conveyed by the speaker. Here, the use of multiple languages or codeswitching is accepted because the speech has distinct language structures that are clear and concise.

According to Jacobson (2004), there is a common understanding that CS is regarded as *bahasa rojak* or *bahasa pasar*, i.e. a substandard language. This connotative meaning refers to the language that is impure, unsystematic, and has elements of foreign languages in Bahasa Melayu. Awang Sariyan (1996) further supports this substandard language, by saying that CS is not new but has existed as a form of pidgin language in the history of human languages. In the Malaysian context, the Baba Melaka community's spoken language is considered to be a variation of the Malay language. This is further supported by the study of Chng Lee Swee Li (1995).

Asmah Hj. Omar (2007) claims that CS among Malaysians exists at all social levels and races. English language is usually used along with bahasa Melayu during CS. She further states that CS in English occurs among Malay speakers frequently in formal situations, such as in meetings, talks, speeches, official interviews, etc. In informal situations, CS with bahasa Melayu, English, and other languages like Tamil, Cantonese, and Malay dialects are frequently used among the Malays in general and the choice of the language varies according to the sociolinguistic situations (Asmah, 1992). Similarly, Nik Safiah Karim (1992) states that CS resembles language in transition, where the society uses more than one language to communicate. However, the interlocutors are not proficient in any of the languages that is used in their speech.

Furthermore, CS is seen as a natural language development process in the usage, where the speaker has a repertoire to effectively manipulate two or more languages in any given speech event. The interlocutors also have access to and use a variety of language resources in their communication (Hood Mohd Salleh and Halimah Mohd Said, 2007).

Others, like Jackbson (2004), maintain that when two languages co-exist, the possibility to codeswitch from one language to the other among interlocutors with similar linguistic background often takes place. Meanwhile, the pressure from different cultures, social, political, educational, and economic features forces the interlocutors to divide their priorities towards the language choices. It further reinforces the status of the interlocutors on the basis of the language he or she selects as the communication medium. Furthermore, the status of the language and the proficiency level of interlocutors determine the choice made during code switching from one language to another Jackbson (1998).

CS happens for many reasons, especially when students want to show their expertise in languages. Besides that, CS also takes place when students are unable to express their thoughts in the dominant language or their L1. Meanwhile, CS occurs during formal

or informal settings and at all levels of the language, i.e. at the phonological, semantic and lexical level. As it is evident from the works of different scholars, as discussed above, it is needless to say that the phenomenon of CS is inevitable in every sociolinguistic situation in a multilingual country. However, the patterns of CS differ according to the communication situation. In other words, all the CS patterns are unique in their own ways which have situational attestation.

AIM OF THE STUDY

The present study was construed to find the intricacies of CS among the students in the selected secondary schools in the Klang Valley, with the following aims:

1. To determine the patterns of codeswitching among secondary school students.
2. To investigate how linguistic patterns of codeswitching are structured.
3. To determine the students' dominance in language choice based on their background.

METHODOLOGY

This is a non-experimental study that follows the qualitative methods of descriptive design. For the purpose of this study, 20 samples were selected. They were of mix gender and different ethnicities (12 Indians, 4 Malays, and 4 Chinese). The samples were selected from 4 secondary schools in the Klang Valley. The samples were given two topics; these are 'Problems of Social Interaction among Teenagers' and 'Disciplinary Problems in School'. Each discussion was conducted in groups of five in an informal setting. The discussions were tape-recorded and their speeches were transcribed for data analysis.

In addition, the samples were also given a questionnaire to gather further data. The questionnaire had three sections comprising of 15 questions in each section. Section A dealt with the demographic particulars, Section B was on the respondents and their family member's education and economic background, and Section C focused on the respondents' and their

family's choice of language dominance. This study used the Matrix Language Frame Model by Myers–Scotton to explain the codeswitching patterns in analyzing the data. According to Myers-Scotton (2001), the matrix language is the participating language variety of the speaker that functions as the source for an abstract grammatical frame of constituents. The Matrix language is thus the language of the speaker which controls the morpheme or word order of the frame, whereas the embedded language is drawn from the guest language and only contributes limited material to permissible content morphemes within the larger constituent. Therefore, in a classical CS context, the language which supplies its core morph syntactic frame for the bilingual constituent is the matrix language and the other, which supplies a limited number of content morpheme (words), is the embedded language.

DATA COLLECTION AND ANALYSIS

As stated above, the data for the present study were collected from twenty respondents studying at four schools in the Klang Valley. Among this four, two were from the urban, one semi-urban, and one from the rural area. The main reason for selecting the respondents from different school settings was to identify whether the respondents' different sociolinguistic backgrounds contributed towards the language variation during communication.

While collecting data, care was taken to include the respondents' multiethnic compositions and those who come from the same ethnic background, as follows:

- Multiracial group of the respondents (Malays, Chinese and Indians)
- Same racial group respondents (Indian)

The main objective of taking the above mentioned two varying groups was to identify the heterogeneity of the CS patterns in their linguistic expositions. The various situations oriented conversations collected from the groups mentioned above were transcribed for the sociolinguistic analysis.

INTERACTION AMONG THE MULTIRACIAL GROUP

Some examples of the utterances during the conversations among the multiracial group are as below:

S. 1

Salah laku pelajar bermaksud melakukan sesuatu yang melanggar undang sekolah terutamanya and for example vandalism.

(Misbehaviour among students means committing an act that is against the school rules for example, vandalism.)

S. 2

Ya, seperti contohnya pergi ke CC atau lepak-lepak kat Shopping Mall ke... atau terus duduk dekat pondok kat luar tu.

(Yes, for example like going to Cyber Café or loitering at the Shopping Mall or ... sit at the shelter out there.)

S. 3

Not only that, pelajar juga suka perli dan buli pelajar lain.

(Not only that, students like to tease and bully other students.)

S. 4

Pelbagai punca berlakunya salah laku pelajar, antaranya lack of love from the parents...kadang-kadang diorang balik ke rumah ... hmm... tak ada orang kat rumah.

(There are many reasons why students misbehave, for example, lack of love from the parents... sometimes when they go home... hmm... no one is at home.)

S. 5

Or... mungkin juga kerana the students like attract others ... menarik perhatian.

(Or maybe because the students like to attract others ... seek for attention.)

Based on the examples above, it is identified that in general the clauses in English do not have significant influence in the sentences used in the conversations. In S1 above, for instance, the clauses 'and for example', 'not only that' (S3), and the English particle 'or' (S5) function as empty forms that do not have any proper function. In S2, the clause 'Shopping Mall' has a functional usage in the sentence, while in S4 'the lack of love from the parents' shows empathic function. Both clauses show that the embedded language, English is a dominant and powerful language.

It is observed that those respondents belong to multilingual communities and they often prefer bahasa Melayu for their daily interactions. Apart from this, the education system at the secondary level gives more importance to bahasa Melayu and English. This too contributes towards the selection and use of bahasa Melayu and English in intra sentential level. This situation can be justified by saying that the respondents have options to access and use resources from various languages during communication.

The above mentioned societal, ethnic, and educational linguistic imposition often make the language choice more complex and fluid by nature. Subsequently, the nature of CS has the tendency to vary from situation to situation and from speech act to speech act.

INTERACTIONS BETWEEN THE SAME ETHNIC GROUPS

In accordance to the multiethnic group discussed above, the ethnic communities which belong to the same ethnic group also have an extensive CS. This is mainly because of the impacts from the multilingual environment, in which they interact and coupled with various socio-economic pressures that exert on the homogenous ethnic communities.

The following sentences can be used as examples to explain the points mentioned above.

S. 6

*Anthe guy-ku experience iruntatha
anthe girl-le santegam pade mudiyum*

(If that guy has experience then the girl will be suspicious of him)

S. 7

*For example, lelaki itu oru girl-le
vidduthu vera girl-kitte ponaatha
avaluku anthe bayam varum.*

(For example, if the boy leaves her for another girl, only then she will be afraid)

S. 8

*Athea bohsia girl-na, avvallaku don't
care.*

(She will not be bothered, if she has no moral virtues)

S. 9

*Kerana anthe girl vera program-mele
terlibat pannuchuna rombe publisiti
aayi dan nama dia akan ellatikum
terinju peminat aayiruvangge.*

(Because if the girl gets involved in other programs, she will get more publicity and will be well known)

S. 10

*Avangge friend-ah palage palage
neraiya situation le avanggelode
character boleh faham.*

(They will better understand their partner's character, if they become friendlier)

In S6, S7 and S8, the lexical forms 'guy', 'girl' are used often during peer group conversation. This shows that the interlocutors have the tendency to maintain English at the embedded level. Meanwhile, in S7 the form 'for example' functions as a discourse connector. As for the clause in S9, 'character boleh faham' is

to show emphasis. However, this clause has the embeddings of both bahasa Melayu and English. In S8, the clause '*dan nama dia akan*' is a gap filler, a form that belongs to the non-functional category.

In all the sentences mentioned above, CS can be identified both at lexical and clause levels. While analyzing the sentences with CS, it is understood that during interactions at the embedded level, both bahasa Melayu and English are often used. On the contrary, the frequency of bahasa Melayu in a sentence is more often as compared to English. In addition, the use of English is comparatively more at the lexical level than at the clause level. This tendency may be due to the fact that the Indian community under study to a greater extent has more exposure to bahasa Melayu than English. In other words, their competence in bahasa Melayu is also better compared to English. Furthermore, there appears to be uniformity while selecting the embedded forms both from English and from bahasa Melayu. For instance, the selection of English forms mostly depends on the socio-economic and educational positions of the interlocutors, as well as the discourse settings. Meanwhile, the selection of bahasa Melayu has two possible reasons. One reason is the use of any cultural or any other ethnic specific forms. In such situations, the users may be able to identify any equivalent terms in their native language, Tamil. The second reason is that the linguistic competency of the Tamil community under study in bahasa Melayu is far better. Subsequently, the interlocutors during conversations often face difficulty in retrieving appropriate words in Tamil from their repertoire. The first category of embedding mentioned above involves English lexical items, like '*girl*', '*guy*', etc. Whereas, for the second category of embedding from bahasa Melayu, such as, '*bohsia*' *vagabond*, *senang easy*, *belanja giving treat*, *pasar malam night market*, etc., can be taken as examples at the lexical level and at the clause level phrases, such as can be taken as examples. Thus, it is evident from the analysis that the phenomenon of CS is prevalent both at the interethnic and intra ethnic levels.

Table 1 shows the details regarding the selection of the informants from the different ethnic backgrounds, their socio-economic position, language dominance, etc.

The information in Table 1 highlights the respondents' background based on their locality of stay, socio-economic position, parental education, and language dominance at home. Out of the twenty respondents, the twelve Indian respondents used Tamil, English, and bahasa Melayu in their daily interaction. Meanwhile, four Chinese respondents used Mandarin, English, and bahasa Melayu during their conversations. Finally, the remaining four Malay respondents converse using Bahasa Melayu and English.

The socio-economic position and educational status determine the respondents' language choice. Three respondents are from the higher income and education category which have enabled them to use more of English. Meanwhile, two respondents from the average income and education category use English as the dominant language and Tamil language as the mother tongue. Another two respondents from the average income and education category use Tamil as their dominant language and English as an alternative language whenever necessary.

One respondent from the average income and education category uses bahasa Melayu as the dominant language, along with an average use of Tamil language. Finally, four other respondents use Tamil as their dominant language during interactions. Out of the four respondents, one respondent comes from the average economic and education category and the remaining three respondents are from the lower economic and education category.

On the other hand, one Malay and three Chinese respondents from the higher socio-economic and education level use English as their dominant language. Meanwhile, among the remaining three Malay respondents, one is from the lower economic and education category and the other two respondents are from the middle level socio-economic and education category use Bahasa Melayu as their dominant language during their conversations. However, one

TABLE 1
Data from questionnaire

No	Respondents	Ethnicity/ race	Locality of stay	Socio-economic position	Parental education	Language dominance
01	01	Indian	U	H	H	E
02	02	Indian	U	H	H	E
03	03	Indian	U	H	H	E
04	04	Indian	SU	A	A	E/T
05	05	Indian	SU	A	A	E/T
06	06	Indian	SU	A	A	T/E
07	07	Indian	SU	A	A	T/E
08	08	Indian	SU	A	A	M/T
09	09	Indian	SU	A	A	T/M
10	10	Indian	R	L	L	T
11	11	Indian	R	L	L	T
12	12	Indian	R	L	L	T
13	13	Malay	U	H	H	E/M
14	14	Malay	SU	A	A	M
15	15	Malay	SU	A	A	M
16	16	Malay	R	L	L	M
17	17	Chinese	U	H	H	E
18	18	Chinese	U	H	H	E/C
19	19	Chinese	U	H	H	E/C
20	20	Chinese	SU	A	A	C

1. Locality of stay
U - Urban
SU- Semi Urban
R - Rural

2. Socio-economic position/Parental education
H - High
A - Average
L - Low

3. Language dominance
E - English
M - Bahasa Melayu
T - Tamil
C - Mandarin

Chinese respondent from the lower economic and education category uses Mandarin as the dominant language.

It was found that during the conversations, the respondents code switch or code mix freely and randomly when a change occurs in the topic. This is supported by Haugen (1972) who states that a change in topic during a conversation will contribute towards codeswitching. When the topic of conversation changes from education to occupation, the interlocutors were found to codeswitch politely by embedding words and terms from other languages. Based on the data collected from the questionnaire, it can therefore be concluded that the respondents who come from the higher socio-economic and educational categories use English as their Matrix language, while their mother tongue and bahasa Melayu as the embedded languages. This phenomenon occurs because the respondents' parents are highly educated and they use English in their daily conversations at home. In addition, they are exposed to codeswitching and use English language with their peers and customers in their work environment. Therefore, it greatly influences the choice of language used in their home environment. During codeswitching, the English language is embedded not only at the word level but also at the phrase and sentence levels. The codeswitching that occurs from bahasa Melayu to English, Tamil, or Chinese to English or vice versa during conversations is more habitual by nature.

Apparently, the respondents from the average economic and educational categories used both English and their mother tongue as their matrix language. Meanwhile, the respondents from the lower economic and educational category use their mother tongue as the dominant language or matrix language. This is because their parents come from the lower economic background and thus, they do not have the opportunity to speak in English. Therefore, the respondents who come from this particular environment have been exposed only to their mother tongue and not any other languages.

CONCLUSIONS

From the study, it is generally understood that the phenomenon of CS is the result of extensive bi/multilingualism. The 20 multiethnic samples from the secondary schools in the Klang Valley were found to use bahasa Melayu as their matrix language along with English. However, when those of the same ethnic group converse, their mother tongue becomes the dominant language with English and bahasa Melayu as the embedding languages.

Furthermore, based on this study, it can be said that the level of CS among the secondary school students is comparatively higher. Besides, the respondent's family background has also been shown to influence their choice of spoken language. Moreover, CS also occurs because of the need for family members to create an identity and rapport between their mother tongue and the English language.

Thus, the present study has revealed that CS in the Malaysian context has a lot of academic potentiality. In other words, this is to say that more statistically validated data collected from various multilingual and multiethnic societies are needed to be able to identify a systematic pattern of CS exclusive to Malaysia. This can be a good futuristic study to CS in Malaysia.

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Review Paper

The Robustness of the Comprehension Hypothesis: A Review of Current Research and Implications for the Teaching of Writing

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ABSTRACT

This article reviews what current research says about the effectiveness of the Comprehension Hypothesis. Drawing insights from the research under review, it then argues that despite the presence of other competing hypothesis (most notably, the Skill Building Hypothesis, the Output Hypothesis and, the Interaction Hypothesis), the Comprehension Hypothesis still stands as the most powerful means for facilitating the acquisition of literacy skills. The article also argues that the specific form of the Comprehension Hypothesis, namely the Reading Hypothesis, is more than sufficient to help learners become autonomous acquirers, the eventual goal of the second language acquisition theory. The article concludes by discussing the implications of the research for the teaching of writing.

Keywords: The Comprehension Hypothesis, the Reading Hypothesis, literacy skill, autonomous acquirers, the teaching of writing

INTRODUCTION

As one of the central theories in language acquisition, the Comprehension Hypothesis, which was formerly known as the Input Hypothesis (Krashen, 2004), is often criticized on the ground that, though it is felt necessary, it is by itself insufficient for acquisition to take place. Ortega (2009), for example, argues that although input is ineluctably necessary, it cannot be sufficient. As a result, other popular hypotheses (most notably, the Skill-Building Hypothesis, the Output Hypothesis, and the Interaction Hypothesis) (Ortega, 2009) have emerged and contested the Comprehension Hypothesis (CH).

The Skill-Building Hypothesis claims that language is learnt consciously via learning

individual rules, which through drills and exercises can be made automatic. The Output Hypothesis claims that rules and items are learnt by trying them out in production.

In sharp contrast to these hypotheses, the CH claims that language is acquired unconsciously through messages we understand. Krashen (2004a) argues that “we acquire language when we understand messages, when we understand what people tell us and when we understand what we read.” (p. 21).

What is of particular interest is that the CH is claimed to be applicable to literacy development, (Krashen, 2005b) its tenet being that the ability to successfully read and write in a foreign language is also the result of comprehensible

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input. Comprehensible input, it is hypothesized, can help accelerate the acquisition of literacy even without formal instruction. The strict condition set for this is that the environment must be supportive and not create anxiety for the acquirers.

From these assertions, it becomes obvious that the CH is not an independent hypothesis. Indeed, most of its basic thesis is closely related to other fundamental hypotheses such as the Affective Filter Hypothesis and the Monitor Hypothesis (Krashen, 1985). These merging hypothetical perspectives are also claimed to make a significant contribution to language acquisition. Although, in a pedagogic context, most of the CH's claims are intuitively appealing, the presence of empirical research studies is called for to justify such a claim.

It is not my intent to present criticisms of the CH, nor will I dwell upon the other competing hypotheses *vis-à-vis* the CH here. Rather, my goal is to show that despite the emergence of other competing hypotheses, the CH is still robust as the core hypothesis in language acquisition studies to date. It has not yet lost its appeal, and many of its fundamental premises are still relevant to contemporary language pedagogy. It can be argued that comprehensible input is not only a necessary, but also a sufficient condition for acquisition to take place.

More specifically, I will examine what current research says about the CH in fostering the acquisition of literacy, and discuss to what extent different studies with different methodologies yield consistent results. I also include my own testimonial, as one of case histories, as evidence to further strengthens this particular hypothesis.

Drawing from the findings of the current research, I proceed to the discussion of the implications of the CH in the teaching of writing in a foreign language context. If the studies under review confirm the robustness of CH, their pedagogical implications are worth discussing.

THE COMPREHENSION HYPOTHESIS: A NECESSARY AND SUFFICIENT CONDITION FOR LANGUAGE ACQUISITION

A compelling corollary of the Comprehension Hypothesis is known as the Reading Hypothesis, a hypothesis which claims that "our reading ability, our ability to write in acceptable writing style, our spelling ability, vocabulary knowledge, and our ability to handle complex syntax is the result of reading" (Krashen, 2005b, p. 21).

The fact that the presence of comprehensible input (aural and written language) is necessary in language acquisition is indisputable. Yet, one may question whether input alone is sufficient for acquisition. This is a controversial issue.

The emergence of other contesting hypotheses, such as the Skill-Building Hypothesis and the Output Hypothesis, and more recently the Interaction Hypothesis (*see* Ellis, 1990; Gass, 1997; Swain, 1985; Ortega, 2009) implies that comprehensible input alone is not adequate. It is, as the scholars argue, necessary but insufficient condition.

In many of his publications, however, Krashen (1989: 1998: 2004c) has been consistent in his view that comprehensible input alone is sufficient for language acquisition to take place. Other hypotheses, as he argues, suffer from severe limitations: they produce only learned competence, they are based on a delayed gratification approach, and no direct evidence exists to support them.

In fact, a massive amount of evidence exists, confirming the possibility of acquiring high levels of language and literacy competence with the absence of output (Krashen, 2004c is an excellent review of this evidence).

The most recent compelling direct evidence buttressing the acquisition without language production argument is that of Mason's study. Mason (2004) conducted a study on the effect of supplementation to an extensive reading programme. Her Japanese subjects aged 18 or 19 years old were divided into three groups;

students writing summaries in Japanese, students writing summaries in English, and students writing summaries in English and having their works corrected and rewriting their summaries. Mason reported no significant difference among the three groups of EFL students, concluding that the groups writing summaries in Japanese made the greatest gains in terms of the amount gained for the time devoted to English. Mason's study showed that output and correction as a supplement to extensive reading proved to be ineffective.

STUDIES SUPPORTING THE COMPREHENSION HYPOTHESIS: A SELECTIVE REVIEW

A considerable number of published studies exist to confirm what Krashen (2004c) has called the "power of reading". This section examines what research has revealed about the Reading Hypothesis, which is believed to be an effective means of increasing literacy and language development.

An overwhelming amount of evidence from case histories, correlational studies and experimental studies abounds and has been reviewed in Krashen (2003: 2004c). All of these studies buttress the claim that recreational reading makes a tremendous contribution to reading ability, the ability to write with an acceptable writing style, vocabulary knowledge, spelling ability, and the ability to use and understand complex grammatical structures (Carson, 1998; Flahive and Bailey, 1998; Kroll, 1998; Sarig, 1998; Mason, 2004).

Here, I review the most recent additional evidence of the power of reading, showing that reading, especially free voluntary reading or recreational reading, is the most effective way of accelerating literacy development in a foreign language.

Sugiharto (2005) conducted an experiment probing the contribution of in-class reading to students' writing competence. Subjects were divided into two groups; control and experimental. The former was taught writing using a conventional method, while the latter

was not. The latter was asked to read and analyze model paragraphs (expository genre) on various kinds of topics. The findings showed that the reading group, except for their language use, achieved greater gains in terms of content, organization, vocabulary, and mechanics in the post-test.

Cho (2004) reported on the efficacy of a two-hour sustained silent reading (SSR) experience among Korean elementary school teachers, few of whom did any recreational reading in English before because of a lack of access to interesting reading material. The subjects were provided with 400 children books displayed in front of the class. They chose books based on their own interests; it was, in other words, a self-selected reading experience. Cho's analysis of the data (a questionnaire and a reflective essay) revealed positive reactions to SSR, a finding that led Cho to the conclusion that self-selected reading motivates further reading and contributes to language development. Having done SSR, the teacher confessed that their abilities in reading and writing improved.

Lee (2005), in an attempt to confirm the power of reading, designed two studies with completely different methodologies. The first study was correlational in nature, attempting to examine the impact of writing apprehension, and writer's block on writing performance. Other predictors which were suspected to affect the results were also included; they were the impacts of recreational reading, writing practice, and attitudes toward reading and writing instructions. The second study was experimental, with the students divided into an extensive reading group, namely those were exposed to reading under less than optimal conditions and a group which received traditional instruction. Both of these different study designs came to a similar conclusion, i.e. recreational reading served as a powerful means of reducing writing apprehension and writer's block, and increasing the frequency of writing. This study provided the evidence by confirming the efficacy of reading with acquirers of English as a foreign language controlling for writing apprehension, writer's block, frequency of writing, and

instruction. No less important, it confirms that recreational reading in school can be effective even when conditions are less than perfect. Mason (2006) confirmed the efficacy of free voluntary reading in improving TOEFL scores. Subjects, who voluntarily engaged in a reading program, were given access to a library of graded readers. Her findings confirmed that not only could input (reading alone) help the students make improvements in their TOEFL score, but it also helped them to become autonomous language acquirers.

Another compelling study of recreational reading was done by Witton-Davies (2006). His subjects were university freshman Taiwanese students learning English as a foreign language. Using two measures of proficiency (the Advanced level of the General English Proficiency Test and a vocabulary test developed by Nation (2001)), Witton-Davies found that certain variables, such as age, extra class attendance, training under native speakers, and time spent abroad in English-speaking countries, were only weak predictors of success in learning English. Reading, however, was found to be the strongest predictor of success in foreign language learning.

Pulido (2004) reported an experimental study on the relationship between text comprehension and incidental vocabulary acquisition. Her participants were 99 native speakers of English learning Spanish. Assigning her subjects to read four contrived script-based narrative passages (two more familiar scenarios and two less familiar scenarios), Pulido found that topic familiarity was a weak predictor in incidental vocabulary acquisition. Her study demonstrated that there was a lack of significant interaction between passage comprehension and topic familiarity. In general, this study strongly supports and extends the robustness of comprehensible and comprehended input in the form of reading.

No less telling evidence is Thamrin's correlational study (2009) on the effects of pleasure reading on writing ability. Thamrin reported that her subjects (N=25), Indonesian learners of English, found a statistically significant correlation between the amount of

pleasure reading and writing ability. Students who reported more reading outperformed those who did less reading in terms of the overall writing components, such as content, organization, vocabulary, language use, and punctuation. Based on this finding, Thamrin concluded that the amount of time spent on reading for pleasure became the strong predictor that affects her respondents' writing quality.

LIGHT READING: THE POWER OF COMIC BOOKS AND NOVELS

We are often advised that light reading, such as comic books, teen romances, teen novels, youngster magazines, and bestsellers—reading materials that both children and adolescents consume almost everyday, can hinder a child's literacy development in understanding more “serious” and demanding academic literature.

Parents especially are fearful that their children are averse to reading school textbooks, and are instead getting hooked to reading bestsellers and comic books. Meanwhile, teachers feel guilty unless they exhort students to finish reading books on science, scientific journal, and other demanding literature, as prescribed in the school curriculum.

Light reading has never found a favour in any language program in such a country as Indonesia. Children—book lovers are seldom encouraged to form a habit of reading for pleasure on their own. They are hardly given freedom to read voluntarily and choose what they like to read.

Thus, the role of light and pleasure reading in enhancing literacy development has been overlooked. Comic books, in particular, have been accused as a big hindrance in promoting heavier reading. They are often claimed to offer no academic value. In many cases, they are treated as “junk reading” that can disrupt children's interests to read academic literature (Krashen and Ujjiie, 2005).

Inspiring students to read “serious” literature is indeed a worthy goal. There is nothing erroneous with any language programme aiming at imbuing students with demanding academic

texts. Yet, there is a grave mistake with the means used to achieve the goal.

Does light reading disrupt children's passion in reading more demanding literature? No. Do parents and teachers need to worry about children who have the habit of gobbling any kinds books that they find genuinely interesting and entertaining to read? They don't have to.

Evidence exists, confirming the robustness of light reading in children's literacy development. One piece of reassuring evidence comes from South Africa's Bishop Desmond Tutu's testimony. Also known as a distinguished writer and thinker, he says, "one of the things that my father did was to let me read comics. I devoured all kinds of comics. People used to say, "that's bad because it spoils your English," but in fact, letting me read comics fed my love for English and my love for reading. I supposed if he had been firm, I might not have developed this deep love for reading and for English" (quoted from *Teachers College Record*, 2005a by Krashen).

Compelling also evidence comes from research using case histories method. A mother whose sons were unmotivated to read and had to be urged, coaxed, and cajoled finally felt relieved after they engaged in reading comic books.

As for her eldest son, she testified that "... devoured what seems to tons of the things... the motivation these comics provided was absolutely phenomenal and little bit frightening. My son would snatch up a new one and, with feverish and ravenous eyes, start gobbling it whenever he was – in the car on the way home from the market, in the middle of the yard, walking down the street, at the dinner table. All his senses seemed to shut down and he became a simple visual pipeline." This mother also noted that comic reading led his son to other reading, saying that "he is far more interested now in reading Jules Verne and Ray Bradbury, books on electronics and science encyclopedias" (quoted from *Teachers College Record* 2005, by Krashen).

From these pieces of evidence, it is clear that light reading provides the background knowledge necessary for the understanding of heavier reading. The evidence also demonstrates

that readers do not stay on the same genre of the same book, but continue to read more serious and demanding books – ones with completely different genres. This shows that readers gradually expand their interests in reading more.

No less important than the above evidence, light reading promotes literacy in general. This is consistent with a general hypothesis that reading more means reading better, writing better, and having more vocabularies and acquiring more complex grammatical constructions, light reading has become one of the strongest predictor of success in someone's ability in writing.

The following quote is a testimony of Tasha Stoltz, a student at Sekolah Bogor Raya, who had her writing published for the first time by *The Jakarta Post* in 2006. Aspiring to become a writer and describing herself as an avid reader of fanfiction and as a "Potteraholic", she wrote, "I also learned to love writing through fanfiction, and because of fanfiction, I look forward to writing school essays and reports, whereas previously I loathed them."

One of my students in my writing class told me recently that she learnt much in using the degree of formality in English vocabulary from comics, such as *The Adventure of Huckleberry Finn*, *The Adventure of Moby Dick*, and *Travellers on Gulliver's Island*. She also reported that she had developed a habit of reading through these comics.

Needless to say, if light reading has a tremendous effect on children's literacy development and offers a great pleasure for children so great that they acquire the language effortlessly, its inclusion in language programme at school is therefore imperative.

From language acquisition point of view, a large quantities of compelling, interesting and engaging junk reading can make a healthy 'diet' for the children to be consumed everyday.

A PERSONAL TESTIMONY

As a non-native speaker of English, I must admit that my writing competence in English results from my self-exposure to English reading

materials, which I find not only interesting and comprehensible, but also compelling, challenging and thought provoking.

Once a beginner language learner with limited proficiency, I was obsessed with light reading materials written both in Indonesian and in English. Folk tales, comics, simplified stories (horror and romance), and magazines were among the materials that became my regular diet at that time.

My teachers never assigned me to read these materials as part of my school assignments. I chose the titles of the books on my own and read them simply to fulfil my desire to read, nothing else. No rewards and incentives were offered for my reading activities. Thus, it was free voluntary reading, self-selected reading or reading for pleasure, reading done with no “accountability”, no testing, no book reports, but for its own sake, for pleasure (Krashen, 2004c: 2007).

Indonesian folk-tales written in English and graded from Beginner, Intermediate to the Advanced level were especially of high interest to me, and almost everyday, I would devour them as parts of my out-class activities. So interesting, comprehensible and compelling were the stories depicted in these readings that when I read I found myself “lost in the book” and barely aware that I was reading in another language.

My passion in light reading still lingered when I studied at the university. Now having sufficient proficiency in English, I still remain a voracious reader. However, I don’t remain on the same diet – reading simplified children literature. Instead, I have moved beyond it. I read more demanding literature, more serious and heavier reading.

Once a good reader, Krashen says, always a good reader. I am now an avid reader of prestigious scholarly journals such as *Applied Linguistics*, *TESOL Quarterly*, *Language Learning*, *College Composition and Communication*, *College English*, *Annual Review of Applied Linguistics*, and *International Journal of Foreign Language Teaching*, just to mention a few.

My exposure to reading both in English and Indonesian has had a tremendous impact on my academic career both as a teacher and researcher

in Indonesia. Light reading, in particular, which I consumed, almost everyday when I was a child, has indeed had a profound effect on me. As a result of reading, I have so far produced over a hundred op-ed articles published in *The Jakarta Post* – a leading English newspaper in Jakarta, Indonesia, and have them reprinted many times in international papers like *The New Straits Times* and *The Brunei Times*. Despite having no formal training in writing in the journalism genre, I managed to publish numerous articles in this genre. Clearly, my competence in journalistic writing results from my self-exposure to reading the newspaper. This attests to Smith’s (1983) hypothesis that “to learn how to write for newspaper, you must read newspapers; textbooks about them will not suffice” (p. 560). In addition, as a result of self-exposure to reading the above journals, I have acquainted myself with written conventions typical in journal writings. I have unconsciously acquired vocabulary, rhetorical structures of academic writing, complex grammatical expressions, and styles. Again, without any training in how to write a scholarly work for publications, I have been able to have my writings published in various refereed national and international journals.

One of the most plausible causes of this acquisition is that both newspaper and academic journals form narrow reading (Krashen, 2004a) – reading by focusing on one topic, author, and genre. The efficacy of narrow input in the form of narrow reading has tremendous impacts on my literacy development. Not only does it serve as important background knowledge for my understanding the content of newspapers and articles in the journal, but it also facilitates the acquisition of writing conventions, styles, grammar, and vocabulary in these different genres. Most important, narrow reading helps pave the way to the attainment of independent acquisition, the eventual goal of language acquisition theory.

This personal testimony, like other case histories presented in Krashen (2003: 2004c), clearly supports the robustness of comprehensible input in the form of free voluntary reading.

IMPLICATIONS FOR THE TEACHING OF WRITING

Conventional wisdom says that the best we can do to assist our students of all levels of language proficiency in developing their writing skill is to give them writing instruction, to exhort them to do more writing practice, and then to give them corrective feedback on their finished, yet often inchoative ideas on paper. In addition, conventional wisdom also tells us that teachers need to painstakingly explain complex grammar rules to their students.

Both writing instruction and the mastery of language rules, however, are of little value in helping student writers acquire writing competence. Many published studies demonstrate that the effects of instruction on students' writing are weak, fragile, and wear off over time. Other studies show that instruction has no effect at all on writing development. Writing instruction does not give students a feel of what good and acceptable writing looks like. Specifically, it does not help students acquire writing style, appropriate diction, and correct spelling (Kroll, 1998).

Increased writing frequency, either through self-sponsored writing or classroom-instructed writing, does not result in significantly increased proficiency, simply because "people do not write enough for writing to have any significant impact on literacy, given the complexity of the systems to be acquired" (Krashen, 1992, p.421).

Similarly, the mastery of the rules of grammar does not contribute to writing development. It is evident that students, who have been exposed to the teaching of grammar for many years, grappling with understanding and memorizing rules, are still unable to display competence in writing.

There is on the other compelling verification that competence in literacy can develop in the absence of instruction. In case histories reviewed in Krashen (2004c), reading alone has shown to be sufficient condition for the acquisition of literacy to take place.

Given the complexity of language and the limitation of direct instruction, a general

conclusion then is that writing competence cannot effectively be acquired via writing and grammar instruction. This, however, does not imply that writing instruction is of no use and should be jettisoned from the school curriculum. There is another alternative; one that offers much better results and less tedious efforts on the part of both teachers and students.

This alternative can best be explained in terms of Krashen's (1984) dichotomy: writing *competence* and writing *performance*. The former refers to the possession of a good writing style (i.e. grammar, vocabulary, and spelling), while the latter designates the ability to write using efficient writing strategies (i.e. planning, drafting, revising, and editing), that is, to use writing to solve problems and stimulate cognitive development.

Writing instruction cannot make students competent in writing, but it can help equip students with efficient writing strategies. As these strategies are teachable, writing instruction is the key to raising students' awareness of how to compose efficiently. By contrast, writing competence can only be acquired via reading. That is, the ability to write in an acceptable manner using correct grammar, vocabulary and spelling is derived from reading, not from writing practice. It is reading, Krashen (1984) says, that "gives the writer the "feel" for the look and texture of reader-based prose" (p. 20). We clearly need to invest more time and energy helping students acquire writing competence through wide reading. Forcing students to write without sufficient competence is tantamount to forcing an engine to work without gasoline.

Although writing styles, grammar, and vocabulary are not acquired via writing, writing has different contributions. It can help us solve problems and makes you smart (Krashen, 2003: 2004b). It can also make us critical. Smith (1983, cited in Krashen, 2004c, p.133) advises us why we do not learn to write by writing:

I thought the answer [to how we learn to write] must be that we learn to write by writing until I reflected on how little anyone writes in school, even the eager students, and how little feedback is provided. No one writes enough

to learn more than a small part of what writers need to know.

It seems then that the best and the only sensible way of accelerating students' writing competence is to get students hooked on books and to make them fly to books, just as an opium smoker flies to his pipe (adapted from W. Somerset Maugham:

“Conversation after a time bores me, games tire me, and my own thoughts, which we are told are the unfailing resource of a sensible man, have a tendency to run dry. Then I fly to my book as the opium-smoker to his pipe...” Nell, 1988, p.232).

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Review Paper

Sports Facilities in Urban Areas: Trends and Development Considerations

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ABSTRACT

Sports and sports facilities development have improved rapidly over the past years in Malaysia. However, such improvements are inadequate compared to the overall development of sports at international level. Through preliminary interview with the managers, it was learnt that the sports facilities are underutilised and people do not use them. In addition, an increase in the amount of public money being spent on the sports facilities, as well as the increase in the number of sports facilities, necessitates the demand to investigate issues surrounding sports facilities development. Universally, there is a current sports facilities development boom. Recent developments are providing new roles for sports facilities in urban areas. However, it is accompanied by changing the cities strategies for large scale development. Although there are many research findings, there are still on-going debates on how to effectively use public money for sports facilities development. Through reviewing the current literature, it can be concluded that the impacts of sports facilities and the ability to affect urban surrounding areas depend on a wide range of factors, including location, context, and usage of the facilities, as well as the culture of sports among people. The aim of this paper is through reviewing the current literature on sports facilities worldwide to identify the gap and address issues on the development of sports facilities in Malaysia. The paper argues that simultaneously with the current interest on sports and sports facilities development in Malaysia, there is a need for a new perspective and a new approach for sports facilities development in the future.

Keywords: Sports facilities, development, urban areas

INTRODUCTION

The definition of a sports facility is different from open recreational areas, such as golf courses to indoor arena, dome, and single-purpose or multi-use stadia. Traditionally, sports facility was a modest facility with a capacity of perhaps a few hundred, serving a small local community and forming part of the social fabric,

along with the religious building, and town hall. The new Olympic movement was proclaimed in 1894 and held its first competition in Athens in 1896. Ever since, sports have emerged in their modern forms and the facilities have evolved into one of the greatest public building forms of the twentieth century, regarded, at its best, as an essential and positive element of civic life (John

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et al., 2007). For the purpose of this study, sports facility is defined as any big enclosed facility for competitive sports, where sports are played, can host sports events, require public money for the construction, maintenance, and big enough to need ancillary construction.

Sports facilities have changed through the years from functional facilities, adapted facilities, state-of-the art facilities to centre of business and regenerating area facilities. Historically, the first generation of sports facilities aimed to cram as many spectators as possible with very few amenities, while in the second generation, they considered to improve and to provide greater comfort for spectators. Security has become a central issue for the third generation. Digital television, satellite communication, and internet have turned sports facilities into media-oriented. This global consideration on sports and sports facilities, on the other hand, given the increased pressure on cities to adopt an entrepreneurial stance to attract mobile global capital, have changed sports facilities at present. In the recent years, they have considered their abilities to shape new cities or regenerate decaying areas of old cities. However, over the past 20 years, investment in the sporting infrastructure at national level in cities was not primarily aimed at getting the local community involved in sports, but instead aimed at attracting tourists, encouraging inward investment, and changing the image of the city (Gratton *et al.*, 2005).

A lot of research has been conducted on sports facilities, looking at both the positive and negative impacts. On the other hand, there are some studies that have explicitly examined the ability of sports facilities as an urban change agent to spur redevelopment in dilapidated districts or to catalyse new development in emerging suburban areas. These studies are considered different indicators for the purpose of studying urban development to determine whether or not this has occurred. This is crucial in ensuring the long-term sustainability of such a huge investment. Although many studies have been done, there is still an on-going debate on the impacts and ability of the sports facilities in urban areas.

In Malaysia, sports and sports facilities developments have improved rapidly over the past years. However, such improvements are inadequate compared to the overall development of sports at the international level (National Sports Policy, 2007). During informal interviews, through preliminary data gathering, it was learnt that sports facilities in Malaysia are underutilised and people do not really use them. However, they are not economic-oriented and the policy of the government is to serve people and they are tax-exempted. An increase in the amount of public money being spent on sports facilities, as well as the increase in the number of sports facilities necessitates the demand to investigate issues surrounding sports facilities development in Malaysia.

This paper was written based on the review of the current literature. It is structured as follows; the next section focuses on the theoretical background of the sports facilities development in urban planning. It provides a brief overview on the recent trends of sports facilities development and identifies the development considerations. The third section concentrates on the sports facilities in Malaysia to address issues according to international considerations in Malaysia. Finally, the conclusions argue that with recent interest on sports and sports facilities development in Malaysia, there is a need for a new perspective and a new approach for sports facilities development in the future. In addition, there is a requirement for further research on the sports facilities in Malaysia.

RECENT TRENDS OF SPORTS FACILITIES DEVELOPMENT

There is a current sports facilities construction boom universally. These facilities are for hosting sports mega-events, such as Olympic Games, Commonwealth Games, or for smaller scale activities. Most of the literature on sports facilities come from the North American experiences as their professional sports facilities are very popular. The US context, involving national sporting league with big crowds at each game and team franchises which are mobile between cities, in addition, the rises of the

so-called 'entrepreneurial cities' enhance the competitiveness of cities within the framework of a globalising economy. Sport has transcended the boundary from being considered as an active leisure pastime to being recognized as having considerable social and economic influence in contemporary society (Davies, 2005).

There are various trends and rationales utilised to support sports facilities development. However, they could provide better public subsidization. Although many researches have done studies to investigate their claims, there is still an ongoing debate on whether to build new sports facility with public funds (Sam and Scherer, 2008). It is due to the requirement of a large amount of money for construction, almost certainly with substantial public investments, and which involve too much money as compared to the cost benefit analyses. There are also the needs for ancillary construction which are often built at public expense with every provision of a new facility. In addition, there is a high cost for maintenance, and the truth is that it is now very difficult for a sports facility to be financially viable without some degree of subsidy (John *et al.*, 2007).

There are a wide range of positive and negative impacts that sports facilities construction have on their surrounding areas and wider cities. In particular, they may have political, economical, social, physical, legal, environmental, and safety impacts. At the same time, they require huge public investment and there is a need to reconsider whether there is enough justification for their funding. Some examples of physical impacts include generating new construction in the district, reusing of vacant building, changes in land use, and spin-off development. Furthermore, there are capabilities to provide substantial social benefits. They might create community, improve interaction, provide recreation, intangible benefits, and alleviate deprivation. In addition, improved transportations could lead to benefits for local communities. On the other hand, congestion, litter, traffic, vandalism, noise, and wrong kind of clientele are some examples of the negative impacts that sports facilities generate on their surrounding areas.

DEVELOPMENT CONSIDERATION

A review of the current literature indicates that it is ascertained that the impacts of sports facilities and the ability to affect urban surrounding areas are dependent upon several considerations. Location, context, culture, and usage are directly affected to achieve sustainability in the sports facilities development.

Location

In the earlier trend, sports facilities were located in urban dense neighbourhood, with an intentional high degree of accessibility to their working class and middle class fan base (Chapin, 2000). As cities decentralised, so did sports facilities. John and Sheared (1997) and Vickery (2007) discussed a major trend of the sports stadia construction in 1960s and 1970s, i.e. the building of large stadia on out-of-town locations, where crowds, whether well or badly behaved, would create fewer disturbances to the everyday lives of people not attending events. Such locations would also reduce land costs and increase ease of access by private cars. However, the next significant step in the development of the stadium occurred in 1989, with the opening of the Toronto Skydome in Ontario, Canada. The public authorities in Toronto had recognised the problems of out-of-town sites and decided to take a brave step by building their new stadium in the very centre of their lakeside city.

Within the past twenty years, there seemed to be a massive return of sports stadia to the city central. Chapin (2000) discusses the location invariably tied to three sets of decision-guiding factors, namely technical factors (e.g. site characteristics), economic factors (e.g. land costs), and political factors (e.g. economic development initiatives). The classic location theory suggests that sports facility location be directly linked to the location of their core market over the time. On the other hand, the locational shifts to the central city sites could be resulting from a host of factors. These factors include the growing importance of the public sector in the site selection process, the linkage of sports facilities to economic development

initiatives, and the changing economics of major league sports. Meanwhile, the third factor is to identify a new fan base, i.e. corporations. These locations provide a much better location fit for this new market, providing easy access for these fans. The recent wave of sports facilities construction has been marked by a migration of such facilities back to the urban core. This shifting of the location of sports facilities into the cities provides the new role as catalytic buildings and for spur development.

Context

Empirical studies revealed that sports facilities on their own are not enough for urban development. The visual and physical connections of sports facilities to their urban environments are significant because they have begun to establish a linkage between the prospects of the stadium or arena and the land around it. At the same time, cities have also begun to approach redevelopment at a geographic level rather than at the individual project site (Chapin, 2002b). Meanwhile, research also indicates that district-level planning with an expressed goal of catalysing district development is important to realizing development outcome (Baade, 1996). The most important way to spur surrounding development is by generating coming and going, drawing people through the urban environment into the facility and later discharging them back into the environment, as well as creating opportunities in both occasions for the visitors to patronize other buildings.

However, many scholarly studies conclude that sports facilities have no significant positive economic impacts (Baade, 1996; Chapin, 2002; Coates and Humphreys, 1999; Richards, 2005; Siegfried and Zimbalist, 2000). In his article in response to Baade, Chema (1996) argued that context is the key and the value as catalyst for economic development depends on where they are located and how they are integrated into a metropolitan area's growth strategy. He further suggests that "the key to sports venues being a catalyst for economic development is locating

them in an urban setting and integrating them into the existing city infrastructure."

In 2005, Santo pointed out that this is a dangerous generalization that ignores the importance of context which is very important. He concluded that the ability of a facility to give impact on its local economy is tied to its context. His finding reports new evidence that was derived from recasting the landmark study of Baade and Dye with the current data which contradicted their conclusion, in that context matter.

Therefore, district-level planning has emerged as an important element in linking redevelopment to new sports facilities. The identification of downtown activity nodes and the formulation of a strategy to connect these nodes are central elements to this new approach. Sports facilities can lead to urban generation if they are considered within a larger development strategy. In order to overcome the isolation, the sports facility development needs to be integrated into a local regeneration strategy to enhance the contribution of the sports facility to local community (Thornley, 2002).

Culture

As mentioned before, most of the literature on sports facilities come from the North American experiences as their professional sports facilities are very popular. However, the culture of sports is different there. Sport has become a defining part of life and culture in North America. There is a profound connection between sports and numerous parts of life: language, holiday celebrations, national, regional, city and school identities, school social life, etc. They build new stadiums only for hosting favourite teams in their cities (Rosentraub, 1996). City officials have become enamoured with ideas of constructing the newest and state-of-the-art stadiums (Richards, 2005).

In America, sports facilities have been a staple of the urban redevelopment toolkit and they will continue to serve as major urban redevelopment tools. Undoubtedly, the impacts

and ability of sports facilities in other countries are different. In order to study in different geographical places, it is important to consider the culture of sports amongst the people as it might have a direct relationship with the impacts of sports facilities in that area.

Usage

Another important consideration is related to the usage of sports facility in the years after its construction. However, the sustainability of impacts is dependent upon future usage. Ken Perry (2001) assumes that the benefits can be through attendance, and therefore measuring the change in attendance can in some ways quantify these benefits. Sustainable development refers to maintaining development over time (Elliott, 1999). In the recent years, sustainability has become increasingly important. It is more important for sports facilities as they require a huge amount of money for construction, ancillary needs and constant maintenance costs. However, there are sports facilities which have been built for world-class sporting events that struggle to produce sufficient revenue to sustain annual operating costs after the event. The sustainability of the impacts and longer term effects are largely dependent upon future usage and the ability to affect the local community (Davies, 2005). In addition, sustainable development seems to be more efficient, especially for developing countries which are faced with strong economic, social, and environmental needs.

SPORTS FACILITIES IN MALAYSIA

During 1950s, in Malaysia, many national sporting associations were formed in the preparation for the 1956 Olympics. At that time, however, the involvement of the government in this sector was very rare and indirect (Aman, 2005). After independence, the government supported the development of sports because it believed that sport could integrate people, and therefore fulfil the national objectives of promoting national unity, the well-being of

the people, their sense of nationhood, national identity and political stability (Aziz Derama, 1984).

According to Aman (2005), since 1988, the Ministry of Youth and Sport has been the central administrative agency for sport and recreation in Malaysia. The National Sports Council (NSC), Sports Division and Malaysian Leisure and Recreation Council are the three sub-agencies working for the Ministry. NSC (high performance sport) and Sports Division (for mass sport programme) are the co-ordinating machinery in Malaysian sports. The Ministry of Youth and Sport, NSC, the Olympic Council of Malaysia (OCM) and National Sport Organisations (NSOs) work in union with the federal and state governments to implement sport policy.

The National Policy in Malaysia is a sport policy for all. It encompasses both high performance sport and mass sport to achieve national development, unity and continued stability (National Sports Policy, 2007). Mass Sport is a relatively recent phenomenon in the country and the priority of the Ministry of Youth and Sports has recently been to provide facilities for mass sports (National Sports Policy, 2007), including Kompleks Belia dan Sukan Negara (National Youth and Sports Complex), Kompleks Rakan Muda (Youth Friendly Complex) in all states and Pusat Belia Antarabangsa (International Youth Centre). The majority of these facilities are under the Ninth Malaysia Plan (2006-2010) and they are quite new. Following this, the first sports school in Malaysia was established in 1996. At present, there are only two sports schools in the country.

The sports facilities in Malaysia have rapidly improved over the past years, especially after the country hosted the 16th Commonwealth Games in 1998. The 16th Commonwealth Games was the first ever held in Asia and the last of the twentieth century. It was also the biggest sporting event Malaysia has ever hosted. The Games had necessitated the construction of the National Sports Complex in Bukit Jalil, Kuala Lumpur to cater to a wide variety of sporting events at a cost of USD200 million. The first

big world-class stadium in Malaysia, prior to the completion of the Bukit Jalil National Sports Complex, i.e. the Shah Alam Stadium was officially opened in 1994.

In Malaysia, there is currently a tremendous interest in sports. This is while internationally, sport is getting more and more influential and it will continue to grow in importance as the world develops into a global village, sharing the English language, technology, and sports (Majumdar and Mangan, 2005).

Table 1 shows the budget allocation for sports development, under the Ninth Malaysian plan, which is more than double that of the previous allocation, and of the total, 48.3 percent (RM 299.9 million) was dedicated to the construction of multipurpose sports complex. In addition, there are various plans for sports which endorse the government’s seriousness and commitment towards the development of sports and a wave of sports investment in Malaysia (Malaysian Sports Industry, 2008).

As mentioned earlier and based on the literature reviewed, the impacts and ability of the recent development of sports facilities are dependent upon several considerations. The following discusses the influence of these factors to the situation in Malaysia.

The first factor is the location of sports facilities, which according to the National Sports Policy, the Ministry of Youth and Sports, is to coordinate planning and distribution of major sports facilities. A 20-year blueprint, in respect of sports facilities based on the strategy to have both high performance sport and mass sport for

all strata of the community, is drawn up by the Ministry of Youth and Sports in consultation with relevant agencies and sports associations. The rationale for the need to plan the sports facilities at the state level is to achieve a more balanced distribution of such facilities in both the urban and rural areas. This redistributive objective is to enable the disadvantaged and disabled groups, who need sports facilities and services more than others but may make the least demand to have access to sports opportunities. The provision of sports facilities is considered as an integral part of housing scheme, as well as to be made accessible to all sportspersons and the mass to ensure their optimal utilisation. The classic location theory has suggested that the location of sports facilities be directly linked to the location of their core market over the time. The above statements suggest that sports facilities should be client-based and accessible by the mass, in line with the theory, and part of the government’s policy for the sports facilities in the future. More emphasis was therefore placed to have a more balanced distribution of the facilities in both the urban and rural areas to serve more people. Therefore, there is no link between sports facilities to economic development initiatives for the location of sports facilities.

The second factor focuses on urbanisation and stimulating urban development initiatives. In this context, urbanisation refers to a demographic change and it is related to historical growth. It can be illustrated in terms of a geographical pattern or statistical figures (Dasimah, 2002).

TABLE 1
Development expenditure and allocation for sports programmes, 2001-2010
(RM million)

Programme	8MP expenditure	9MP allocation
Sports complexes	188.0	299.9
Upgrading and maintenance of sports facilities	113.2	280.9
Athletes development programmes	6.0	40.0
Total	307.2	620.8

Source: Malaysian Economic Planning Unit, 2006

The involvement of the government is usually required to enhance the efficiency and quality of life within the urban centres, apart from maintaining law and order (Cohen, Muylaert and Rosa, 1997; Clammer, 1996). The interaction and relationship among these factors affect the growth and development of urban centres, stimulate the development and expansion of urban activities and often evolve the development of the secondary (industrial) and tertiary (services) sectors (Cohen, Muylaert and Rosa, 1997). On the other hand, Asian cities are re-imagining competitive in the global marketplace. The range of strategies often seems to mirror developments in the Western cities (Yuen, 2008). However, bricks and mortar approach, which has started from US, has centred on entertainment, tourism, culture, and arts (Frieden and Sagalyn, 1989; Rosentraub, 1995). This strategy equates economic development with new construction and generates activities in different districts of the city. However, it needs to be considered within a larger development strategy and integrated into a local regeneration strategy.

Globalisation has significantly modified the sovereignty of the countries, whereby they have to compose with forces whose impacts are beyond their national limits (Aminuddin and Parilah, 2008). Furthermore, globalisation needs to take extra attention in developing countries becoming the focus of debates on urban growth and development. The major cities of Asia, which include Shanghai, Singapore and Kuala Lumpur, actively extended their 'culture industries' (heritage conservation, cultural precincts, festival marketplace, iconic cultural centres) in the past, and more recently, their sports infrastructure to promote city regeneration (Olds, 1997; Silk, 2002; Kim *et al.*, 2006). Therefore, there is a need for a new perspective and a new approach for sports facilities in the future.

The third and fourth factors are culture and usage, respectively. Malaysia is a multi-racial and multi-religious society. In particular, Malays, Chinese and Indians make up the three main ethnic groups in this nation. Arising from

this plurality of ethnic cultures, the Government may seek to promote some common cultural practices as parts of its nation building efforts. The aim of the National Sports Policy is to develop an active, health and fit society through sports and physical recreational activities, in line with the overall efforts of the government in nation building (National Sports Policy, 2007).

Based on the preliminary data gathered, it was found that sports facilities are being underutilised and people do not use them more generally due to sports programmes. In addition, the Malaysian National Health and Morbidity Survey indicated that 70% of Malaysians did not exercise (Ministry of Health, Malaysia, 1997). However, in his study, Aman (2005) confirmed that the opportunities for the Malaysian community to participate in sports and recreation policy and planning are limited. A similar result was also reported by Yusof and See (2008). Since 1991, there has been an increase in the number of stadiums with better facilities in Malaysia. In the 1990s and the early 2000s, the Malaysian government built a total of 12 soccer stadiums, and most of these stadiums came with the seating capacity that could accommodate more than 30,000 spectators. However, the average attendance per soccer match recorded during the same period was only about 2,000 to 6,000 spectators. Nevertheless, no studies have been done to identify the cause for the poor spectators' attendance. It was suggested that the reason for the poor attendance could probably be due to the poor quality of soccer matches.

In America, sports facilities have been a staple of the urban redevelopment toolkit and they will continue to serve as major urban redevelopment tools. Sports have become a defining part of the life and culture in North America. In 2006, the Malaysian government emphasized the importance of sport in nation building in Malaysia, in addition creating sports culture. This contradicts with the situation in the past, i.e. creating a sports culture would have influenced the future development of sports facilities and their role as urban planning tools.

SUMMARY AND CONCLUDING REMARKS

Sports and sports facilities development in Malaysia is something new. However, the development of sports and the sports facilities in Malaysia is obviously increasing. The recent interest in the sports facilities development and a wave of sports investment in the country necessitate the demand to study issues surrounding the sports facilities in the Malaysian context. This paper was based on the review of the current literature, on the theoretical background of sports facilities, so as to identify the gap and address the issues pertaining to the development of sports facilities in Malaysia. Based on the review of the empirical studies globally, it could be concluded that the contributions of the sports facilities development to the development of the urban surrounding are determined by a wide range of factors. These include the location, context and usage of the facilities, as well as the culture of sports among the people.

The sports facilities in Malaysia have a balanced distribution to serve the people. Nonetheless, no relationship was found between sports facilities and economic development initiatives. On the other hand, changing the nature of planning and urban development in the cities, in addition to increased globalisation, lead to the changes in the trend of sports facilities in the recent years. The global trend is to use cultural sports and entertainment facilities for urban development initiatives, but most major cities in Asia expanded their culture industries to promote city regeneration. Therefore, in line with the current interest on sports and sports facilities development in Malaysia, there is a need for a new perspective and a new approach for sports facilities development in the future. Apart from creating sports culture, which has been emphasized by the government since 2006, this will also affect the role of sports facilities in the future. Thus, further research is necessary to provide more information on the current situation of the effects of sports facilities and the ability of the different case studies on urban

development within the Malaysian context to enhance future development.

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Pertanika policy prohibits an author from submitting the same manuscript for concurrent consideration by two or more publications. It prohibits as well publication of any manuscript that has already been published either in whole or substantial part elsewhere. It also does not permit publication of manuscript that has been published in full in Proceedings.

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Pertanika accepts submission of mainly four types of manuscripts. Each manuscript is classified as **regular** or **original** articles, **short communications**, **reviews**, and proposals for **special issues**. Articles must be in **English** and they must be competently written and argued in clear and concise grammatical English. Acceptable English usage and syntax are expected. Do not use slang, jargon, or obscure abbreviations or phrasing. Metric measurement is preferred; equivalent English measurement may be included in parentheses. Always provide the complete form of an acronym/abbreviation the first time it is presented in the text. Contributors are strongly recommended to have the manuscript checked by a colleague with ample experience in writing English manuscripts or an English language editor.

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Size: Should not exceed 5000 words or 8-10 printed pages (excluding the abstract, references, tables and/or figures). One printed page is roughly equivalent to 3 type-written pages.

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4. Special issues

Definition: Usually papers from research presented at a conference, seminar, congress or a symposium.

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George Swan¹ and Nayan Kanwal²

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²Research Management Centre, Universiti Putra Malaysia, Serdang, Malaysia.

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Swan and Kanwal (2007) reported that ...

The results have been interpreted (Kanwal et al. 2009).

- References should be listed in alphabetical order, by the authors' last names. For the same author, or for the same set of authors, references should be arranged chronologically. If there is more than one publication in the same year for the same author(s), the letters 'a', 'b', etc., should be added to the year.
- When the authors are more than 11, list 5 authors and then et al.
- Do not use indentations in typing References. Use one line of space to separate each reference. The name of the journal should be written in full. For example:
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 - Mellers, B. A. (2006b). Treatment for sexually abused children and adolescents. *American Psychologist*, 55, 1040-1049.
 - Hawe, P. (2005). Capturing the meaning of "community" in community intervention evaluation: Some contributions from community psychology. *Health Promotion International*, 9, 199-210.
 - Braconier, H. and Ekholm, K. (2006). Swedish multinationals and competition from high and low wage location. *Review of International Economics*, 8, 448-461.
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7. **Examples of other reference citations:**
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- Chapter in Book:** Bjork, R. A. (2007). Retrieval inhibition as an adaptive mechanism in human memory. In H. L. Roediger III & F. I. M. Craik (Eds.), *Varieties of memory & consciousness* (pp. 309-330). Hull: Hull University Press.
- **Proceedings:** Amir Awang. (2006). Counseling, human resources development and counseling services. In Sulaiman M. Yassin, Yahya Mat Hassan, Kamariah Abu Bakar, Esah Munji and Sabariah Mohd. Rashid (Eds.), *Proceedings of Asia Pacific Conference on Human Development* (p. 243-246). Serdang: Universiti Putra Malaysia.
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JTAS is devoted to the publication of original papers that serves as a forum for practical approaches to improving quality in issues pertaining to tropical agricultural research or related fields of study. It is published twice a year in **February** and **August**.

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Submissions in **English** should be accompanied by an abstract not exceeding 300 words. Your manuscript should be no more than 6,000 words or 10-12 printed pages, including notes and abstract. Submissions should conform to the Pertanika style, which is available at www.pertanika2.upm.edu.my/jpertanika/index.htm or by mail or email upon request.

Papers should be double-spaced 12 point type (Times New Roman fonts preferred). The first page should include the title of the article but no author information. Page 2 should repeat the title of the article together with the names and contact information of the corresponding author as well as all the other authors. Page 3 should contain the title of the paper and abstract only. Page 4 and subsequent pages to have the text - Acknowledgments - References - Tables - Legends to figures - Figures, etc.

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