LANGUAGE CHOICE AND PERCEPTIONS IN EDUCATION DOMAIN AMONG STUDENTS AND ACADEMICS IN A MALAYSIAN HIGHER LEARNING INSTITUTION

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Abstract

The sociolinguistic investigation reported in this study examines the phenomenon of language choice in the education domain among students at a private higher learning institution in Malaysia. These students sat for the SPM examination in the year 2009 and their English language perceptions towards learning mathematics and science in English is also investigated. It is seen as important and relevant to examine the factors that govern students' choice of a particular language in a particular setting. Why do they choose to use one code rather than another, and why do they prefer to use this code in examinations are the questions that this study has attempted to answer. Language choice is a very complex issue and the factors which might influence language choices are equally complicated because the study of language choice is often linked to other factors like ethnicity, multilingualism, code-switching, language maintenance and shift. There are 182 respondents in this survey study adopted a quantitative approach and a descriptive analysis was conducted using the SPSS. 9 subjects that include an administrator and 8 academicians are interviewed and data is also analyzed qualitatively. The findings seem to show that a large percentage of students have chosen to use English in learning science and mathematics but opted not to use English in examination for various reasons.

Keywords: Language choice, language perceptions, education domain, language shift, language maintenance.

1. Introduction

Many programs and policies have been introduced in the Malaysian educational system. Some has gone through tremendous changes over the year. There is a shift in language in education domain from the year 2003 where national language is replaced by English in education domain for subjects related to science and mathematics. Malaysian Ministry of Education feels it is important for these subjects to be taught in English in order to equip the students with the necessary knowledge and skills that can accelerate access and mastery in these fields of knowledge in order to compete effectively in the international arena (Ministry of Education, 2002, p.2). A reverse in this shift is observed in the year 2010 where due to immense public pressure, the status of national language has to be maintained again in education domain. Subjects related to science and mathematics is reverted in transition from English to Bahasa Malaysia from year 2010 to 2012. This decision raised many debates among the general public, parents and even teachers on its effectiveness as it is still in the transition stage.

This paper aims to investigate the language choice of Malaysian students in education domain which comprises language used in classroom and in examination. The main language used in Malaysian government aided primary and secondary schools are Bahasa Malaysia and English is taught as a second language. The Malaysian higher learning institutions use both Bahasa Malaysia and English in their syllabi. The growing demand for English language competency among Malaysian students in science and technology leads to these subjects taught in English from 2003 to 2009. Malaysian students who sit for high stake examinations like UPSR, SPM and STPM are given freedom to choose the language that they are comfortable with to attempt these examination although the medium of instruction in classroom is in English for subjects such as Physics, Chemistry, Biology, Additional Mathematics and Modern Mathematics.

Many teachers infused their lessons with some translations in Bahasa Malaysia to help students to comprehend the content based instructions better. Some students attempt these examinations in English while some others still prefer to use Bahasa Malaysia. There are also students who use both Bahasa Malaysia and English in these examinations. This study aims to obtain information about the language choice of Malaysian students in education domain, and the reasons behind their choice and their general language perceptions.

1.1 The objectives of this paper are to:

- 1. Investigate tertiary students' language choice in education domain.
- 2. Examine tertiary students' and academics' perceptions towards teaching and learning mathematics and science in English.
- 3. Identify administrative point of views on the use of English in education domain.

1.2 The research questions posted in this study are to find out:

- 1. Which language do the tertiary students use in education domain?
- 2. What are the tertiary students' and academics' language perceptions in education domain?
- 3. What are the administrator's views on the use of English language in education domain?

1.3 The significance of the study

By knowing the language choice and perceptions of Malaysian students, it will further inform us on the reasons why they prefer a language and not the other. This study provides an empirical and interview data on Malaysian students' language preference, administrative view on language policy and educators points of view in teaching Science and Mathematics in English. Fishman (1964) as cited in Hsi (2004) proposes that one language may be more appropriate than the other language in certain domains because of constellation of factors such as participants, location, and topic. The choice of code is often governed by clear functional differences between the codes. For example, a typical Chinese boy from a SJK(C) may learn his subjects in Mandarin in school but speaks Hokkien (a local Malaysian dialect) with his parents and speaks informal Malaysian English or Malay with his peers or friends in his community (if he is from SK or SRK school) or informal Mandarin with his friends and family (if he is from SRJK school) which are mixed with Hokkien and Malay words with his siblings. Formal conversation may be in standard Malay and English in education domain whereas an informal conversation at home or within community. These students are free to choose between standard variety of English and Malay, or the more informal variety of both these languages, or even a mixed variety in school domain. Many courses offered in Malaysian higher learning institutions are taught in English.

Therefore, these institutions require undergraduates to have adequate language competency, for English is used extensively as the sole medium of instruction in the programmes like Engineering and Information Technology. Most lectures and examinations are administered fully in English in most private higher learning institutions in Malaysia. The digital libraries provide vast array of books, journals and periodicals and all these resources are available mostly in English. The mastery of English language is strengthened through its usage for more challenging postgraduate studies and for wider applications in conducting research in the field of science. Most of the journals and articles in the field of science and technology is written in English. Malaysian students are left with no choice to choose their own language to study in tertiary education especially in private higher learning institution as the content based instructions are mainly conducted in English. The students in private higher learning institution are expected to have at least a credit of C6 in SPM English language, Physics, Biology, Chemistry, additional Mathematics and Mathematics before they are accepted to pursue their studies in the field of science and technology. Meanwhile the minimum requirement for international students is to have at least a TOEFL or IELTS score of 6.0 before being accepted to pursue their undergraduate or postgraduate studies. Therefore, it is inevitable that Malaysian students are constantly faced with the options of making meaningful language choices when they want to enroll into a school, higher learning institution and during examination. The linguistic choice in a multilingual context like in Malaysia needs to consider several factors such as the language user's background, national language policy and the domains in language use.

2.0 Review of Literature

This paper intends to highlight the language choice of Malaysian students with the focus in education domain. The meaning of language choice is usually linked to debates over the official language in a country and in Malaysian context, English language, which is the second language in education system, is considered a competing language with Bahasa Malaysia which is the official and national language.

Fishman (1972) in his studies conforms that people use language as per status of the domains. A domain is a theoretical construct widely used by researchers in sociolinguistic studies. The concept domain was first used by Schmidt Rohr as cited in Fishman 1966:428. It was later popularized by Fishman who defines it as..... A socio-cultural construct abstracted from topics of communication, relationships and interactions between communicators and locales of communication in accord with the instructions of society...."(Fishman, 1972:82). According to Giddens (1989), the theoretical construct of a domain has proven to be very useful, particularly when describing language choice among students and community which involves social factors such as who is talking to whom, where, the social context, the function and topic of the discussion. Martin (2005) examined the language practiced in classrooms in two rural schools in Sarawak, Malaysia. He noted the existence of discrepancy between the national language which is Bahasa Malaysia which receives recognition as the official language and the Malaysian language policy of using English as the medium of instruction to teach subjects such as science and mathematics. Martin (2005) collected his data by recording the lesson and this data which he calls as "the voices of the local classroom participant" showed that teachers and students were making use of code-switching or bilingual in their teaching and learning.

These students whom their native languages were Iban and Kelabit were found not using their native language but used safer languages in code-switching which were English and Malay. Martins (2005) further stated that codeswitching is a bad practice and plead learners should be allowed to use native languages in learning their science and mathematics along with Malay and English. Yet, there is another co-existing problem which hinders his plead where the teachers in these schools are not all who are native speakers of Iban and Kelabit and they would still code-switch in Malay and English which are more dominant languages in Malaysia. Creese and Blackledge (2010) did a research on bilingual approach to language teaching and learning in Chinese and Gujarati community language schools in the United Kingdom. They found that "as participants engage in flexible bilingualism as an approach to make students relate their knowledge to the content they learn. Creese and Blackledge (2010) have also attempted to identify some of the specific knowledge and skills shown by the subjects in practicing flexible bilingualism and flexible pedagogy. These skills include "the use of bilingual label quests, repetition, and translation across languages, the use of student translanguaging to establish identity position both oppositional and encompassing of institutional values and the recognition that teachers and students skillfully use their languages for different functional goals such as narration and explanation" (p.112-113).

Giddens (1989) in his study of the Puerto Rican community in New York used the concept of domain. He found that Spanish was regularly used in family discourse whereas English was used in education and employment. In his analysis of the use of English among Italo-Australians in Sydney, Rubino and Bettoni (1991) as cited in Lim (2006), covered 46 situations in four domains (family, friendship, work or school and transactions) taking into account the variables of interlocutors, topic and setting. In another study on the use of English in South India, it was found that Kannada is the dominant in intimate domains while English is dominant in formal and utilitarian domains among students in the state of Karnatak. However, other studies showed that for some communities' language choice is influenced by role relationship rather than domain in which the discourse takes place. In a study of language shift in a Hungarian-German bilingual community in Oberwaat, Gal (1979) found that the speakers age and social status was the most important single factor in language choice in that community.

According to Holmes (2001; 23), domain is very useful for capturing broad generalizations about any speech community. In other words, it describes which code or codes are usually selected for use in different situations. Tam (1986), as cited in Iris (1993) conducted a study on language choice in the medium of instruction in schools among Hong Kong individuals and he found that language choice in education domain heavily rely on the government's language policy and practices. He added that the language decision in educational setting is usually influenced by the demand from the language users even though the Hong Kong education Commission 1984 had reported that individual school administrator has the freedom to choose their own language of instruction. Tam (1984), as cited in Iris (1993) reported that strong parental preference and beliefs over English is because of its high market value in Hong Kong and Chinese language is not considered as a language used by ruling class and by learning the subjects in Chinese will not improve the students chances to gain power and prestige. Chinese language does not share the same status as English is probably due to the inequality of social and economic opportunities attached to it. Hence Tam (1984) as cited in Iris (1993) concluded that language policy and practices in tertiary education and business practices effects the Hong Kong individual's language choice.

According to Hannah (2004), Kenyan languages may be categorized into three different major groups: Bantu, Nilotic and Cushitic. However, as a result of linguistic diversity, the country is triglossic in which only three languages: Kishawili, English and indigenous languages are used for different purposes and domains. In the education domain, English enjoys an upper place among Kenyan society. However the promotion of English in education domain refrain the development of other ethnic languages since English is the medium of instruction in higher education in Kenya. Gorman (1974) as cited in Hannah (2004) conforms that the use of English in education resulted the Kenyan students' deterioration of linguistic knowledge in their first language. Moreover Whiteley (1974) as cited in Hannah (2004) observes that the education in Kenya is not supportive of the development of indigenous and vernacular languages because there is a lack of financial support, trained personnel and standardized writing systems in these language for the first three years of primary education, followed by Kishwahili in the fourth and fifth years, and then English language would become the language of higher education. Hannah (2004) concluded that English has gradually become a lingua franca among the elite and educated Kenyan who are living in urban areas, and it is a language that some Kenyan use even at homes and with friends, where traditionally indigenous languages dominated.

Hannah (2004) suggested that the traditional languages can be preserved through informal education experiences when children spend time with their grand parents during school holidays. Holmes (2001:19-50) cited several reasons affecting language choice in education domain. According to her, pupils may choose to use particular code because it is easier for them to comprehend the subject in that language and it makes it easier to discuss a particular topic regardless of if they are speaking to peers or educators or school administrators. Others may use different addressees because they share the same code, or the code is commonly used in Malaysian classroom where the Science and Mathematics are taught in English which enforce the students to think, speak and write in English. Hsi (2004) points out that there are three possible results of language choice: firstly in language maintenance, where a community chooses to continue using the language choice is the co-existence of language maintenance and language shift. Fishman et al. (1985), as cited in Hsi (2004), states that the three results of language choice discussed above result in linguistic resolutions. It is clear that in Malaysia, both languages are competing to function as in the same domain, situation and role relation to be the language for use in education. Theory of language shift is an important aspect that needs to be discussed in this chapter as it is related to the objective of this study: to examine the language choice of Malaysian students in education domain.

A language shift happens if a community decides to adopt another language and abandon the language that it traditionally used. In Malaysian education domain, an attempt to shift the teaching of science and mathematics from the year 2003 failed at the end in the year 2009 as the community chooses to continue using Bahasa Malaysia (language maintenance) that it has been previously used. Theory of Language shift was found by Joshua Fishman in 1970's. Reversing a language shift has been an area of interest among many sociolinguists in recent decades. Reversing language shift involves establishing the degree to which a particular language has been 'dislocated' in order to determine the best way to assist or revive the language. These steps consist of some processes. Fishman's theory proposed that efforts should be concentrated more on earlier stages to restore a language until they have been consolidated by a society in their daily life before proceeding further to the later stages. Firstly, Fishman (2001) claims that a language shift occurs if the acquisition of a specific language by adults who act as language apprentices and most of the remaining speakers of the language are elderly and socially isolated from other speakers of the language.

Secondly, Fishman (2001) states that language shifts occur if a socially integrated population in a country actively uses a language. Thirdly, Fishman (2001) states that a language shift is suitable in a country if the state permits it, and where numbers warrant, it can encourage the use of the language in compulsory state education. After the above stages have been achieved and consolidated, the government may encourage the use of English in higher education and government services. If the earlier stages are not achieved, the implementation of later stages will leave an undesirable effect and hinders the policy makers from achieving their goals. The success in using Malay as the national language and as the medium of instruction was an expected outcome of the national language policy, but it has also been viewed as contributing to the neglect of English that is taught and learned in schools.

Chitravelu (1985) conforms that the decline in English language proficiency among school leavers after their SPM examination is based on the overall achievement in terms of percentages that passed the norm-referenced test attributes to the emergence of monolingual Malay speaking rural students. Sophia et.al (2009) examined learner's perceptions towards the teaching of science through English in Malaysia and found non-limited English proficient (NLEP) learners had "significantly more positive attributes towards Science in English, greater parental support, and experience of using the English language than limited English proficient (LEP) learners". Some measures which they suggested to address the LEP learners' needs include "creating a non-threatening and conducive English speaking environment within the school community" and to apply "appropriate instructional strategies" to address the different needs among the LEP learners (p.67). According to Gill (2007), Malaysians have to move from the extreme nationalism which concentrates on being a language nationalist only and not a knowledge nationalist, but it should be a development oriented nationalist to ensure the people of this nation succeed, to be able to stand tall and to be respected by the rest of the world. Gill (2007) added that people with no knowledge of science and technology will be very poor, backwards and working as servants to other people, and if Malaysians have no knowledge, they will be servants to those with knowledge.

3.0 Methodology

The aim of this paper is to investigate language choice and perceptions of Malaysian university students in education domain. This study applies a mix method of both quantitative and qualitative method with a descriptive design. This study also adopted the descriptive survey approach in which questionnaire is used for the purpose of data collection. This study is further enhanced by interviews with eight lecturers and one senior administrator from a private higher learning institution. A pilot test is carried out on thirty non-responding students to allow ambiguities to be clarified and poor questions to be improved. Nevertheless, the questionnaire has been found to be acceptable and has not posed any problems to the students. To ensure the consistency of the instrument used in this study, the reliability Coefficient is computed using SPSS version 17.0. The Cronbach Alpha obtained shows a reliability of the instrument of .920. In this study, purposive sampling method is adopted. Purposive sampling includes methods of selection in which elements are chosen according to the specific purpose. The numbers of the student subjects in this study are 182 which comprised of science stream students. 50% of them are from Faculty of Engineering and the remaining 50% are from Faculty of Information Technology.

These respondents are currently pursuing their foundation studies in this private higher learning institution. Statistical Package for Social Sciences (SPSS) version 17.0 for Windows is used to analyze and code the data. Descriptive statistic is used in order to answer the research questions that were posed earlier. According to Ary, Jacobs and Razavieh (2002), descriptive statistics are used to organize, summarize and describe observations. Therefore, descriptive statistic in this study is to determine the language choice and the language perceptions among MMU students in education domain. This includes description of respondent's gender, level of education they have completed, socioeconomic background, the school they studied and the area they are from. The frequency scores, percentages and mean are calculated for each variable to illustrate the results. In order to enhance this study, some interview sessions are conducted. The first are interview sessions with eight Mathematics and Science lecturers from this institution. These lecturers shared some information based on their observation towards the following matters: students' reactions towards learning Mathematics and Science in English, students' content understanding when English is a barrier to them, use of English in class or group discussions and students request for translation.

4.0 Discussion

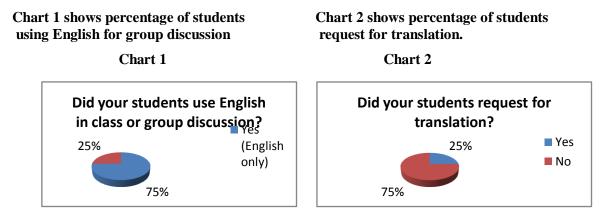
The analysis of the data shows variety of results based on the research questions posted on language choice. The quantitative analysis shows the highest percentage or 98.9% choose to use English because vast availability of resources has encouraged students in using this language as their reference books are in English. Among other reasons for using English, 85.7% or 156 respondents choose English as the language of choice because they learn mathematics and science in English in school. Meanwhile 72.5% choose English as their teachers teach mathematics and science in English and this clearly shows the medium of instruction in schools are in English too. In contrast, only 99 respondents or 54.5% state they are more confident in using English in exams. The highest percentage of disagreement toward using English is seen when 96.2% or 175 respondents find it not easy to score in examination by using English. Meanwhile 113 respondents or 62.1% don't prefer to use English as a medium in examination. According to the results attained, English is less chosen as the language of choice in examination, yet it gained more acceptances in teaching and learning the subjects.

It can be inferred that students relatively don't prefer to use English in examination due to an examination anxiety caused by language barrier. This can be further defined as 69.2% or 126 respondents state it is not safe to use English in examination. The results show that most of these students have learned mathematics and science in English and this is one of the factors that make them to attempt the examination in English. In examining these students' English language perceptions, highest percentage or 62.1% strongly agree that learning science in English is useful for life outside school but only 54.4% strongly agree for mathematics. Meanwhile 58.2% strongly agree that learning mathematics in English is easy as compared to only 53.8% who strongly agree learning science in English is easy. This shows acquisition of mathematics by using English is more accepted than science although the result shows 99 students or 54.4% strongly agree that learning mathematics and science in English is interesting. 59.3% agree learning mathematics and a science subjects in English are easier.

Finally, 89 students or 48.9 % strongly agree and 31.3% show agreement that it is easier to secure a job if one is able to master science and technology in English. The results show that English is still the popular language of choice among many young Malaysian students especially among students who want to pursue their tertiary education in science and technology. The highest mean score (M=99.375, SD= 5.988) shows that respondents strongly agree with the perceptions supporting the importance English language, meanwhile (M= 15.875, SD= 4.412) shows that respondents are not sure about the statements thus unable to make their perception, and only (M= 7.875, SD= 1.834) strongly disagree with the use of English in education domain. The evidence from this study suggests that the language choice among Malaysian students in education domain shows preference to English language, yet the respondents generally do not prefer to use English language for discussion in study groups and to attempt high stake examinations. It can be concluded within the quantitative inquiry that the Malaysian students in this university prefer to use English as the language of their choice in education domain for various reasons stated above, yet they show anxiety to use English in examination.

The qualitative stance by the interviews reveals that the students are keen in using English as a medium of instruction in learning mathematics and science. The interview data disclose students could not cope up with the content when English is a barrier to them. Consequently, these students use bilingual dictionaries to enhance their understanding towards the content. Almost half of the students usually conduct their class or group discussion in English. Four subjects' state students with same background use more native language in conversation. Other subjects conform on higher proficiency level in English contributes to the students confidence in expressing their ideas in that language. The interview data also shows students who are weak in English prefer to use Bahasa Malaysia in their class or group discussion. Some subjects state their students request for translation (from English to Bahasa Malaysia) when they have problems understanding the key terms and when the questions are too complicated. The subjects suggest that in order to improve students' ability to understand the content when English is a barrier is by taking up English proficiency courses, use bilingual dictionary, use bilingual mathematical dictionary and do more practices and drills.

Meanwhile, adding graphics into teaching (slides, charts, graphs), using simple English to explain, giving more examples and explanation, and to show step-by-step solutions to questions and equations can enhance the instructions. 2 subjects disagree on the idea of bilingual instruction and propose the use of only English as the medium of instruction especially in tertiary education. This proposal is seen relevant as references and teaching materials are vastly available in English. All subjects agree that students have no confidence but anxiety in using English in high stake examination.4 subjects state students are being not confident in using English as they are afraid of being penalized for their mistakes and in the current examination orientated education system grades count the most. 7 subjects agree that the examination anxiety is not only due to language but also due to inability to understand the content of these subjects.



Secondly, an interview is conducted with a top senior administrator cum Physics lecturer. As an experienced academician and administrator, the subject states that mathematics and science based subjects are taught in English beginning year 2006 across all faculties in Malaysian universities. In faculties such as Medical, Dentistry, Engineering and Computer Science, the medium of instruction is in English. However, other faculties like Education, Social Science and Law, 60% of the instruction is in English. It is mentioned that students' overall performance is good and there is always a language demand in the faculty of Law. The subject outlined the following implementation in order to improve the acquisition of content knowledge in Mathematics and Science when English is a barrier to the students, i.e. improvisation on curriculum, teacher's training and life long education, hiring skillful academician, and an open interaction in English language speaking environment. In regards to Ministry of Education's move to revert the teaching of Mathematics and Science to Bahasa Malaysia starting 2012, the subject foresees a critical transition period at school level.

He added, in future varsity intakes, only students with credits in English should be accepted and a higher language requirement for admission must be imposed. This varsity may have to train students in the foundation and diploma levels with content knowledge by using English before these students pursue to faculty. Syllabus and classroom instruction should be reviewed to cater for the future needs. The subject asserts the importance of indirect learning through web based online interaction in universities. In administrative point of view, the idea of giving Malaysian students a freedom to choose their preferred language in learning the content based subjects is found not appropriate. It is stressed this will further complicate the management and form logistic problems. Early streaming in high school should be abolished and only introduced when they are in tertiary education. Nevertheless, this subject suggests that students with higher social economic status may opt for international schools or private schools that offer UK based education or baccalaureate certificates.

This further promotes liberation in choosing the best programmes which receive world wide recognition such as A levels or O levels instead of SPM and STPM. He mentioned that students may have a leap in language acquisition by opting for globally recognized language certificates such as TOEFL or IELT and reinstated that academic policy should be made to reflect holistic education, where curriculum and co curriculum are designed to meet future needs. Therefore, policy should be made to produce develop and advance students for future needs. He further comments that as a policy maker, one should be able to foresee what the needs are in 5-10 years. He also applauds the Malaysian government's move in bringing more native foreign language experts and to enhance teachers training and facilities, for Malaysia is investing heavily in education sector.

5.0 Implication and recommendation

Evidence from this study suggests that language shift which took place since 2003 left a tremendous change in the linguistic choice among Malaysian students and more students are now able to accept and adapt to English language as a medium of instruction in education domain. The Malaysian language policy makers need careful planning and implementation from now on to ensure the students are not left behind in education, as from the year 2012, Bahasa Malaysia will be used in the teaching of mathematics and science. The government is now concern in dignifying Bahasa Melayu and strengthening English language through a new language policy known as (MBMBI). This policy is to replace PPSMI starting from the year 2012. The ministry of education is also in the plan to reduce reliability on high stake examination oriented education and will focus more on the hands on activities which are more practical and on going classroom based assessments in schools.

These moves will certainly hip up the morale of students from exam anxiety. Nevertheless, Malaysian students have to be prepared once again to adapt, change and accept new language policy and assessment methods. This study further suggests that more sociolinguistic investigations to be carried out in a wider scope in Malaysian education setting. It is also recommended that in a multilingual Malaysian society where the social needs and disparity is wide among its people, a more comprehensive and viable approach could be adopted by teaching science and mathematics in selected schools based on students academic merits. This approach could be granted as to allow high achieving and English proficient students to continue learning science and mathematics in English. This may be seen as a more liberal policy than the current monolingual system. Families with higher economic status could enroll their children to international schools where the medium of instruction is solely in English. Apart from just looking at the linguistic aspect in education domain, further researches should be conducted in the area of language planning and policy making. These studies should also be incorporated with inquiries on cause and affect of language shift and maintenance in a multilingual nation.

Results

Table 1 shows Summary of results for Language Choice in Education Domain

Summary of Results for Language		Yes	No		
Choice in Education Domain	Frequency	Percentage %	Frequency	Percentage %	
 Do you use English in learning Mathematics and Science? 	156	85.7	26	14.3	
2. Do teachers teach Mathematics and Science subjects in English?	132	72.5	50	27.5	
3. Do you feel more confident using English in exams?	99	54.5	83	45.5	
4. Is it easier to learn Science and Mathematics in English?	108	59.3	74	40.7	
5. Do you use reference books in English?	115	63.2	67	36.8	
6. Do your study group members always discuss in English?	57	31.3	125	68.7	
7. Do you prefer to use English in exam?	69	37.9	113	62.1	
8. Is it easy to score in exam by using English?	7	3.8	175	96.2	
9. Is it safer to use English to pass the exams?	56	30.8	126	69.2	

Table 2 shows Summary of results for Language Perceptions in Education Domain

Summary of Results for Language Perceptions in	Strongly agree		Agree		Not Sure		Disagree		Strongly Disagree		
Education Domain	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Mean
1.Learning Mathematics in English is easy	106	58.2	50	27.5	13	7.1	7	3.8	7	3.8	4.362
2.Learning Science in English is easy	98	53.8	57	31.3	17	9.3	6	3.3	4	2.2	4.313
3.Learning Mathematics in English is interesting	99	54.4	51	28	19	10.4	6	3.3	7	3.8	4.258
4.Learning Science in English is interesting	99	54.4	51	28	19	10.4	6	3.3	7	3.8	4.258
5.Learning Mathematics in English will be useful for life outside school	99	54.4	57	31.3	12	6.6	5	2.7	9	4.9	4.274
6.Learning Science in English will be useful for life outside school	113	62.1	48	26.4	8	4.4	4	2.2	9	4.9	4.384
7. It is difficult to secure a job if one is unable to master science and technology in English	92	50.5	50	27.5	21	11.5	9	4.9	10	5.5	4.126
8. It is easier to secure a job if one is able to master science and technology in English	89	48.9	57	31.3	18	9.9	8	4.4	10	5.5	4.148

Note: 1.PPSMI-Pengajaran dan Pembelajaran Sains dan Matematik dalam Bahasa Inggeris.

- 2. SPM-Sijil Pelajaran Malaysia- Malaysian Certificate of Education.
- 3. Etems-Teaching of mathematics and science in English.
- 4. UPSR- Ujian Penilaian Sekolah Rendah- Primary School Testing and Evaluation.
- 5.PMR- Penilaian Menengah Rendah- Lower Certificate of Education.

6.MBMBI- Dignifying Bahasa Melayu and strengthening Bahasa Inggeris

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