Journal of Sultan Alauddin Sulaiman Shah
JSASS
Journal of Humanities & Social Sciences
ISSN: 2462 1692 e-ISSN: 2289 8042
Vol. 10, No. 2, (November, 2023)

Teachers' perceptions and challenges on Dual Language Programme (DLP) in Meradong district

Persepsi dan cabaran guru terhadap Program Dwi Bahasa (DLP) di daerah Meradong

Siti Huzaimah Abdullah[1], Zaimuariffudin Shukri Bin Nordin*

[1] Faculty of Cognitive Sciences and Human Development, Universiti Malaysia Sarawak, Malaysia, sitihuzaimahabdullah@gmail.com, 0198161473

* Faculty of Cognitive Sciences and Human Development, Universiti Malaysia Sarawak, Malaysia, nzaim@unimas.my, 0168600364

ABSTRACT

Dual Language Programme (DLP) was introduced in order to improve the level of English Language proficiency of students in primary and secondary school in Malaysia. This has become a vital topic since the Ministry of Education (MOE) was requested to review the implementation of DLP as the teachers and students face challenges in teaching and learning of Science and Mathematics in English. The implementation of Dual Language Programmes (DLP) in the teaching and learning of Science and Mathematics is an initiative under the 'Upholding the Malay Language and Strengthening the English Language' (MBMMBI) policy. Though it has some similarities with the previous policy known as 'English for the Teaching of Science and Mathematics' (PPSMI), its execution is idiosyncratic in its own way. Since its inception in 2016, the programme has entered its third cycle involving students in primary and secondary schools in Malaysia. Thus, this study aims to identify the teachers' perceptions on DLP and the challenges they faced after the implementation. Considering teacher' language capabilities, attitudes, teaching support and acceptance of the programme, this study uses a questionnaire with open-ended questions to unravel the aforementioned issues. A total of 67 DLP teachers from different schools in Meradong district in Sarawak participated as the respondents of this study. The finding shows that most of the teachers have their own insights towards the implementation of DLP as well as the different challenges that they faced and are currently facing as they implemented DLP during their teaching and learning process in the classroom. Even though certain school are keen to teach both Science and Mathematics through DLP, nevertheless, pupils' lack of proficiency in English language had hindered the effectiveness of DLP implementation, therefore resulting in confusion among pupils towards their learning content.

Keywords: Dual Language Programme (DLP); implementation; challenges; English language

ABSTRAK

Dual Language Programme (DLP) telah diperkenalkan untuk meningkatkan tahap penguasaan Bahasa Inggeris di kalangan pelajar. Ini menjadi topik hangat sejak Kementerian

ISSN: 2462 1692 e-ISSN: 2289 8042

Vol. 10, No. 2, (November, 2023)

Pendidikan Malaysia (KPM) diminta untuk mengkaji pelaksanaan DLP kerana guru dan pelajar menghadapi cabaran dalam pengajaran dan pembelajaran Sains dan Matematik di dalam Bahasa Inggeris. Pelaksanaan *Dual Language Programme* (DLP) dalam pengajaran dan pembelajaran Sains dan Matematik adalah inisiatif di bawah dasar Memartabatkan Bahasa Melayu dan Memperkukuhkan Bahasa Inggeris (MBMMBI). Walaupun mempunyai beberapa persamaan dengan dasar sebelumnya yang dikenali sebagai 'Bahasa Inggeris untuk Pengajaran Sains dan Matematik' (PPSMI), pelaksanaannya adalah idiosinkratik dengan caranya tersendiri. Sejak dimulakan pada tahun 2016, program ini telah memasuki pusingan ketiga yang melibatkan pelajar di sekolah rendah dan menengah di Malaysia. Oleh itu, kajian ini bertujuan untuk mengenal pasti persepsi guru terhadap DLP dan cabaran yang mereka hadapi setelah pelaksanaannya. Dengan melihat kemampuan bahasa, sikap, sokongan pengajaran dan penerimaan program oleh guru, kajian ini menggunakan soal selidik dengan soalan terbuka untuk menyelesaikan masalah-masalah yang disebutkan di atas. Seramai 67 orang guru DLP dari pelbagai sekolah di daerah Meradong telah mengambil bahagian sebagai responden untuk kajian ini. Hasil kajian menunjukkan bahawa sebahagian besar guru mempunyai pandangan mereka sendiri terhadap pelaksanaan DLP serta pelbagai cabaran yang mereka hadapi ketika mereka melaksanakan DLP semasa proses pengajaran dan pembelajaran mereka di dalam bilik darjah. Walaupun terdapat sekolah tertentu yang berminat untuk mengajar Sains dan Matematik melalui DLP, namun kekurangan penguasaan murid dalam bahasa Inggeris telah menghalang keberkesanan pelaksanaan DLP, seterusnya telah mengakibatkan kekeliruan di kalangan murid terhadap isi pembelajaran mereka.

Kata Kunci: Dual Language Programme (DLP); Pelaksanaan; Cabaran; Bahasa Inggeris

Journal of Sultan Alauddin Sulaiman Shah
JSASS
Journal of Humanities & Social Sciences
https://jsass.kuis.edu.my
ISSN: 2462 1692 e-ISSN: 2289 8042
Vol. 10, No. 2, (November, 2023)

Received: August 31, 2023 **Accepted:** Nov 03, 2023 **Online Published:** Nov 30, 2023

1. Introduction

Dual Language Programme (DLP) was introduced in 2016 under the Upholding Bahasa Malaysia and Strengthening English Language (MBMMBI) policy after the abolishment of the Teaching and Learning of Science and Mathematics in English (PPSMI) policy by the Malaysian Cabinet in the year 2012. DLP is an English reinforcement program based on the school's choice, where students are given the option to choose either English or Malay language for teaching and learning of Science, Mathematics, Information Technology and Communication, and Design and Technology subjects (Official Portal for Ministry of Education Malaysia, 2015). The main purpose of DLP is to have more students who are proficient in English language. The status of English as a second language in Malaysia plays the main factor in teaching and learning to acquire knowledge in science, technology as well as other academic fields (Melor, Nur Ainil & Mohammed Amin, 2013).

However, many feedbacks and criticisms from various fronts rose against this programme. Huge numbers of teachers claimed that DLP resembles of the Teaching and Learning of Science and Mathematics in English (PPSMI) policy. Moreover, NGOs has urged the government to reject the DLP and prioritize the mother tongue education (Free Malaysia Today, 2019). They believed that mother tongue language in education has played an essential role in national development. The ministry is still being asked to abolish the DLP since its implementation in 2016. While others criticized the teaching and learning Science and Mathematics in English, a teacher from Klang sees it as a wise decision taken by the ministry to implement the teaching and learning of Science and Mathematics in English (The Star, 2018).

The secretary-general of National Union of Teaching Profession (NUTP), Harry Tan Huat Hock had advised the Ministry of Education to provide more intensive training for the DLP teachers to improve their English language proficiency (New Straits Times, 2019). It is because about 90% of teachers are not ready to conduct teaching of Science and Mathematics in English due to their poor command of English language (Nair, 2019). According to Harry Tan, this is also to make sure that there are enough teachers to teach those subjects in English. This is because the number of teachers is limited nationwide. To achieve the government's aspiration to make Malaysia a developed nation, firstly, Malaysians need to be proficient in the English language. As such, Malaysians have no choice but to start to accept the learning of Science and Mathematics in English as it is it's a fundamental step to be able to compete in the international arena.

The collaboration between language and mathematics knowledge and scientific understanding may assist an individual to improve their comprehension of the English language. As stated by Esquinca, Piedra and Herrera-Rocha (2018), dual-language programmes create an environment in which learners can develop their knowledge of science, technology, engineering and mathematics in two languages. In short, few studies have been conducted examining the implementation of this programme on a small scale. Yunus and Sukri (2017) investigate the views of pre-service teachers regarding the programme and identify that more than 50% of the respondents stated that language mastery was a major challenge in the learning process (Unting & Yamat, 2017). All in all, through the

Journal of Sultan Alauddin Sulaiman Shah
JSASS
Journal of Humanities & Social Sciences
ISSN: 2462 1692 e-ISSN: 2289 8042
Vol. 10, No. 2, (November, 2023)

implementation of DLP, it provides students the opportunity to improve their English proficiency skills as well as explore various knowledges (Ashairi, Mohamed & Melor, 2017). Hence, this study aims to examine teachers' perception towards the implementation of DLP as well as the challenges that they faced throughout the implementation of DLP in the classroom.

2. Objectives

The objectives of this study were to;

I. To identify teachers' perceptions in the Meradong district towards the implementation of the Dual Language Programme (DLP).
II. To find out the challenges faced by teachers in the Meradong district during the implementation of the Dual Language Programme (DLP) in the classroom.

3. Literature Review

English as a medium of instruction in teaching and learning Science and Mathematics is inevitable in many parts of the globe. Studies conducted in European countries (Kershaw, 2018; Mifsud & Farrugia, 2016) have demonstrated the use of English in the teaching and learning of Science and Mathematics. Issues such as student performance, teacher competency and the practice of bilingual strategies are commonly discussed in these studies. This is also a prevalent topic in the African region (Mthiyane, 2016; Mokiwa & Msila, 2013). Similarly, Asian countries such as the Philippines (Racca & Lasaten, 2016) and Hong Kong (Hu & Gao, 2018) have also experienced different views on dual-language programmes. This implies that English in the teaching and learning of Science and Mathematics is a growing trend across the globe.

English language instruction in science and mathematics serves as an avenue, allowing graduates to navigate and develop information to succeed internationally and boost the marketability of graduates in the workforce. Additionally, they may improve their vocabulary through the communication hours of the student's English. This program is aligned with Malaysian Education Blueprint (2013-2025) goals of producing students who are at least bilingual in Malay language and English.

In many contexts, students learn content through the medium of English, as instruction initiatives have been established to provide an international learning experience in countries where English is not the primary language (Rose and McKinley 2018). Many teachers welcome the adoption of English Medium Instruction (EMI) in their classrooms, believing that EMI may increase students' language and content knowledge simultaneously; others feel that the development of both content knowledge and language is not their responsibility (Macaro, 2018). Moreover, many teachers receive no specific EMI training, and as a result, do not develop the necessary linguistic competence and pedagogical skills to deliver content effectively in English (Dearden 2015).

ESP stands for English for Specific Purposes such as English for teaching and learning science. English language learning in scientific contexts, so we adopt the term English for Scientific Purposes (EScP). To be more specific, EScP refers to both science teaching in an ESP context and Science Literacy Instruction (SLI). Yore and Treagust (2006) mentioned that science literacy in science education is indispensable since it enhances

Journal of Sultan Alauddin Sulaiman Shah
JSASS
Journal of Humanities & Social Sciences
ISSN: 2462 1692 e-ISSN: 2289 8042
Vol. 10, No. 2, (November, 2023)

learners to have a better understanding of the specific discourse of scientific writing and promotes critical thinking skills.

As scientific writing patterns and critical thinking skills are needed in addition to strong language abilities, especially in higher education, non-native speakers of English studying science need to be instructed in both English and SLI. In the context of science inquiry, literacy practices support learners by enabling them to grapple with ideas, share their thoughts, enrich understanding, and solve problems (Krajcik and Sutherland 2010). From this, we can see that language skills play a vital part in helping students enhance their content knowledge, which is the aim of ESP. Snow (2010) claims, to help students understand science, teachers cannot overlook students need to realize the language skills such as writing and discussing science.

Cheuk (2012), shows that science students should acquire well developed language skills such as reading, writing and speaking in order to demonstrates sound scientific reasoning. Also highlights that when students are exchanging information, there is a need for strong communication skills in terms of listening and speaking. This demonstrates that the four English language skills (reading, writing, listening and speaking) are vital for science instruction. In the context of teaching Science using English in Malaysia both at secondary and primary school levels, particularly for non-English department teacher and students, ESP approach has been commonly applied. This is for improve their ability to use English for reading their textbooks in their academic work.

While research confirms Dual Language Programme (DLP) support academic growth with all students, there remains a national concern regarding the availability of qualified teachers who are prepared for the unique requirements of dual language teaching (Liebtag & Haugen, 2015). Firstly, Jesica and Hamidah (2017), have conducted a study to discover the challenges faced by the teachers during the DLP implementation. The study shows that teachers find it difficult to teach students due to poor English proficiency. Also, teachers are not prepared to conduct teaching due to lack of guidance and information on DLP. Besides, teachers who involved in this programme did not receive any specific guidance, such as seminars from the ministry, for them to be able to carry out teaching effectively. A study conducted by Melor and Saiful (2017) to discover perceptions of pre-school teachers in teaching and learning Science and Mathematics in English shows that 58% of pre-school teachers do not agree to teach Science and Mathematics in English.

Meanwhile, 74% of pre-school teachers claimed that it is difficult for them to teach those subjects in English. Based on the study, most of the pre-school teachers have a negative understanding towards PPSMI. They agree that DLP is a correct platform compared to PPSMI since Science and Mathematics can be taught in both Malay and English Language. Nurfaradilla, Sarah & Sharifah (2018) in their research, found that teaching science in English help students to pursue their studies in related fields and also increase the career prospect. They found that science teachers support the ministry's idea of implementing DLP in schools. It is because they wanted to develop their English proficiency to conduct their teaching effectively. Also, it is found that science learning through DLP enhances students' understanding of the subject, where it allows the students to be familiar with the scientific terms and English language. Based on a study conducted by Norhisham, Norazilawati & Noraini (2018) shows that the readiness of science teachers towards the implementation of DLP in terms of knowledge is at a high level, whereas their competency is at a moderate

ISSN: 2462 1692 e-ISSN: 2289 8042

Vol. 10, No. 2, (November, 2023)

level. Moreover, the science teachers' interest towards DLP implementation is at a moderate level. Their study found that the level of readiness and competency of a teacher will have the greatest impact on the student's achievements.

Classrooms where content standards are delivered in two languages with groups of students who are both minority and majority language speakers give cause to re-examine teachers' preparation in order for successful teaching and learning in two languages. Likewise, school administrators working with teachers across the nation are facing increasing expectations to improve students' academic outcomes as a direct result of informed teaching and critical, linguistically supportive instruction. Therefore, responding to the nuances of dual language teaching within teacher preparation is increasingly vital to provide the specialized training they require while also addressing the national dual language teacher shortage (Knight, Lloyd, Arbaugh, Gamson, McDonald, Nolan, and Whitney, 2014; Darling-Hammond, 2012; Herrera, Cabral, & Murry, 2013).

4. Methodology

This study is quantitative-based research. Therefore, questionnaire surveys, was used to achieve the objectives of this study. This study sought to ascertain the perception and challenges that teachers in Meradong district faced in teaching through the Dual Language Programme (DLP). In doing so, we adopted a quantitative approach in analyzing the data collected from questionnaire surveys. The respondents of this study consisted of 67 teachers from random schools in Meradong district where 68.2% were female respondents and 31.8% were male respondents. All of them had their education in the Malay medium of instruction. The questionnaire set contained four sections, Section 1, Section 2, Section 3 and Section 4. Section 1 and Section 2 covers the demographic data about teachers' biographical and professional backgrounds. Section 3 is to obtain their perceptions on the implementation of the DLP and Section 4 is to discover the challenges they encountered during the implementation of DLP in their teaching and learning sessions.

Teachers from random schools in the Meradong district were asked to complete a questionnaire on their perceptions and challenges that they faced during the implementation of DLP Related to that, Section 3 consisted of 7 statements that measured the strength of their agreement related to teachers' perceptions towards Dual Language Programme (DLP) which were rated on a scale of 5 points Likert (1=Strongly Disagree to 5=Strongly Agree) and the scale based on these items was found to be reliable (Cronbach's $\alpha = 0.80$). Section 4 contained open-ended and close-ended questions. The data collected were analyzed using frequency and percentage. A pilot study has been conducted prior to actual study, where 15 respondents randomly chosen to test the questionnaire set with an aim to examine the suitability of the research instrument. A few improvements were made to the questions after the pilot study was conducted. All the items were built based on researchers' experience as science teachers and relevant literature. Due to its novelty, the questionnaire was subjected to a pilot testing procedure. Following this procedure, amendments were made to the questionnaire. A reliability analysis yielded a Cronbach's of 0.80 for the questionnaire items. The survey was distributed via google forms.

ISSN: 2462 1692 e-ISSN: 2289 8042

Vol. 10, No. 2, (November, 2023)

5. Findings

5.1 Teachers' Perceptions and Challenges

This study has been conducted to answer the two research questions which are, what are the perceptions of teachers in Meradong district towards the implementation of the Dual Language Programme? and the second research question is, what are the challenges of teaching and learning faced by the teachers in the Meradong district during teaching and learning sessions after the implementation of the Dual Language Programme? This section describes the results of data analysis based on the respondents' answers to the questionnaires that have been conducted.

Table 1. Teachers' Background Information

No.	Items	Response	Percentage (%)
1	**Gender**	Male	31.8
		Female	68.2
2	**Subject being taught**	Science	52.2
		Mathematics	47.8
3	**DLP classes being taught**	Year 1	36.4
		Year 2	50
		Year 3	3
		Year 4	7.6
		Year 5	0
		Year 6	3
4	**Academic qualification**	Sijil Perguruan Asas	9
		Diploma	13.4
		Bachelor Degree	70.1
		Master Degree	7.5
5	**Options**	Science	40.3
		Mathematics	20.9
		English	6
		Other	32.8
6	**Proficiency in both language**	Moderate	79.1
		Good	19.4
		Very good	1.5

ISSN: 2462 1692 e-ISSN: 2289 8042

Vol. 10, No. 2, (November, 2023)

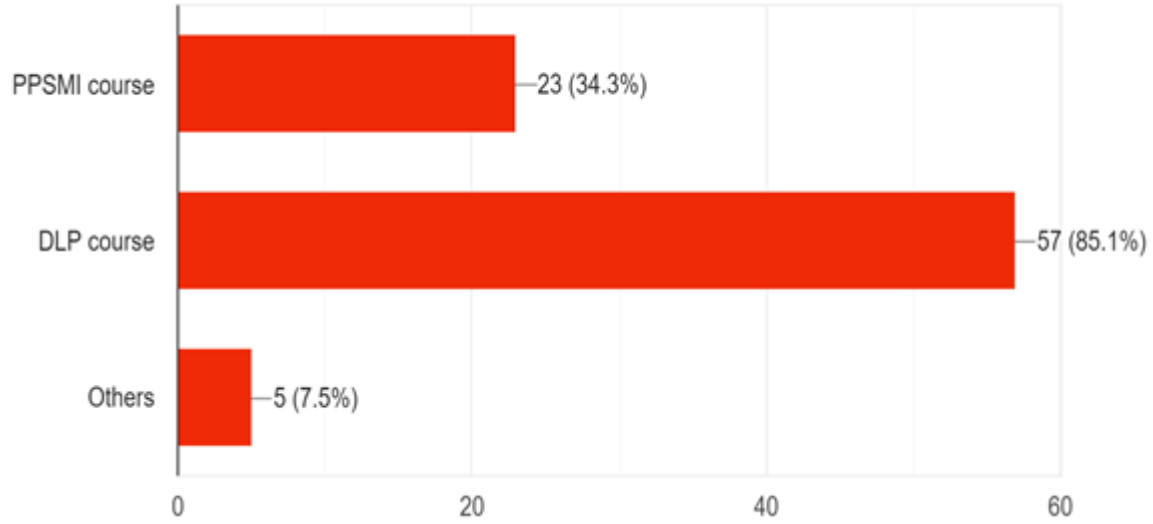


Chart 1. Courses Attended by Teachers in Meradong District

Table 1 and Chart 1 shows the teachers' background information. There were 31.8% male teachers and 68.2% female teachers who participated in this study. They are from different schools in the Meradong district and most of the respondents are teacher who are teaching Science and Mathematics. Most of the respondents are teaching primary school students ranging from Year 1 until Year 6 where 70.1% of them have academic qualification of bachelor degree. Other than that, most of the respondents that participated in these questionnaires are those teachers majoring in Science, Mathematics, English and other subjects as well. This shows that every teacher particularly those who are teaching Science and Mathematics subjects are highly interested when it comes to Dual Language Programme (DLP) issues because based on data provided in Chart 1, 85.1% of these teachers had attended DLP course. These teachers are also of different level of proficiency in both languages where most of the teachers are of moderate level of proficiency where79.1% of them are of moderate proficiency level and a very few of these teachers are of very good proficiency level. Therefore, from this data, it shows that the level of proficiency in both language among teachers actually affect their capability of conducting the Dual Language Programme (DLP).

Table 2. Teachers' Perceptions towards the Implementation of the Dual Language Programme

No.	Items	Response (%)				
		1	2	3	4	5
1	English is the international language of communication and language of technology.	1.5	1.5	20.9	43.3	31.3
2	Science / Mathematics should be taught in English.	3	12.1	43.9	31.8	9.1
3	The use of the English language for teaching and learning Science / Mathematics can significantly improve the students' command of English.	1.5	6.1	34.8	47	10.6
4	Teaching and learning Science / Mathematics	4.5	10.6	39.4	34.8	10.6

ISSN: 2462 1692 e-ISSN: 2289 8042

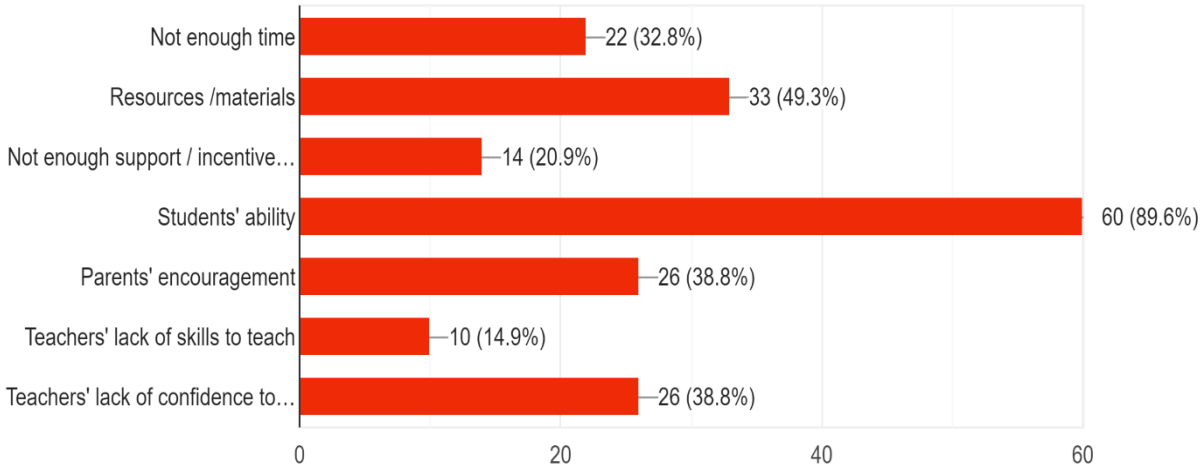
Vol. 10, No. 2, (November, 2023)

	in English leads to confusion between words.					
5	I usually use the Malay language as a medium of instructions for some students when teaching Science / Mathematics subjects even though the book is in English.	1.5	12.1	36.4	25.8	24.2
6	I believe positively towards the implementation of the Dual Language Programme.	1.5	3	34.8	45.5	15.2
7	I am able to carry out strategies for language teaching and learning in Mathematics / Science.	1.5	3	48.5	37.9	9.1

**Note: Likert scale: 1=Strongly disagree, 2=Disagree, 3=Neither agree nor disagree, 4=Agree 5=Strongly agree*

Based on the data provided in Table 2, 43.3% of the teachers have agreed that English is an international language. 31.8% teachers agreed that they should teach Science and Mathematics subjects in English. Furthermore, 47% teachers agree that teaching Science and Mathematics using the English language can improve their student's command of English. However, 34.8% teachers claimed that teaching and learning Science / Mathematics in the English language leads to confusion in the usage of scientific terms and the terms used in learning mathematics. Furthermore, 25.8% of the teachers also claimed that they use the Malay language as medium of instructions though the book is in English. Most teachers where 45.5% of the teachers believed positively towards the objective of the implementation of the Dual Language Programme, in which 37.9% of the teachers stated that they were able to carry out strategies for language teaching and learning in Mathematics and Science after the introduction of the Dual Language Programme was introduced.

Chart 2. Challenges Faced by Teachers during Teaching and Learning Session



ISSN: 2462 1692 e-ISSN: 2289 8042

Vol. 10, No. 2, (November, 2023)

Table 3. Challenges Faced by Teachers during Teaching and Learning Session

No.	Items	Response (%)
1	Not enough time	32.8
2	Resources / materials	49.3
3	Not enough support / incentive from government	20.9
4	Students' ability	89.6
5	Parents' encouragement	38.8
6	Teachers' lack of skills to teach	14.9
7	Teachers' lack of confidence to teach	38.8

The findings based on the data provided in Chart 2 and Table 3 indicated that all of the teachers claimed that they are facing difficulties when teaching Science and Mathematics in the English language. Most of the teachers stated that students' ability was the main problem in ensuring the effectiveness of the Dual Language Programme (DLP). Besides that, 49.3% teachers claimed that the lack of suitable teaching resources and materials during the implementation of Dual Language Programme (DLP) had also affected their teaching and learning session which leads to 38.8% of these teachers experienced lacking in confidence to teach. Furthermore, 38.8% and 20.9% of these teachers claimed that the lack of support from government as well as the lack of encouragement from parents had also hindered the implementation of DLP in the classroom. 32.8% of those teachers also claimed that there was not enough time given for them to get used to implementing DLP in the classroom which in result 14.9% of these teachers claimed that they were lacking in skills to teach using DLP. Therefore, from this it shows that, there are several challenges encountered by these teachers in order to implement Dual Language Programme (DLP) in their classroom.

Table 4. Challenges Faced by Teachers during Teaching and Learning Session

Science Teachers	Mathematics Teachers
Challenges faced by the teachers	
"Some students will be passive when PdPc session is conducted entirely in BI"	
"Low English proficiency of students"	
"It is hard for students to understand and remember the mathematics terms in English."	
"Language barrier between teacher and student and some attitude that can make science taught in English face difficulty"	
"We need more time to implement DLP and more time to see the results so please don't suddenly change again or suddenly stop DLP. We are not some lab rats or an experiment. Let us implement it first then given the time we will see the results."	

6. Discussions

English is a language that widely used especially in the fields of science and technology. According to Drubin and Kellogg (2012), English is now becoming a language of science. It is because English is one of the languages that used in most activities related to science and technology (Foyewa, 2015). Furthermore, science and technology are the main factors that drive the development of a country (Anaeto et al., 2016). In addition, mathematics is also one of the knowledge areas that closely associated with science in many aspects. Realizing the

Journal of Sultan Alauddin Sulaiman Shah
JSASS
Journal of Humanities & Social Sciences
https://jsass.kuis.edu.my
ISSN: 2462 1692 e-ISSN: 2289 8042
Vol. 10, No. 2, (November, 2023)

importance of the English language, Cabinet decided Science and Mathematics be taught in English. It is because there might be a tremendous impact on our students and our education system, both in short-term and long-term if the ministry decided to teach these subjects in the Malay language. Tun Dr. Mahathir Mohamad stated that the national education policy would not be affected if schools use English to teach Mathematics and Science. It is because Science and Mathematics are unlike any other subject, which can be learned in Bahasa Malaysia (The Star, 2015). Most of the teachers in Meradong district agree that teaching and learning Science and Mathematics in English is a challenging process even though it can improve a person's English proficiency. As put forward by Zuraini (2014), teaching and learning Mathematics and Science in a language that is not the learner's main language is complicated. Most students face difficulties in learning Science and Mathematics subjects in the English language. They find it difficult to engage in the lesson and understand the new words or terms introduced in each topics. In addition, teachers and students in rural areas are also accustomed to the use of Malay as a teaching medium for this subject. Yunus and Shukri (2017) also found that Science teachers face problems in teaching DLP Science well because the teachers who teach do not have enough in-depth knowledge of Science, Technology, Engineering and Mathematics or better known as STEM. The study conducted by Ismail and Md Yusoff (2020) found that the mean score of DLP students is lower compared to the mean score of non-DLP students. With that students find it difficult to engage in learning because they are not competent in mastering the English language.

Teachers continue to use the Malay language as a medium of instruction and also translations since some students are weak in understanding their explanations and lessons in English. So, these students expect teachers to explain in Malay since it is easy to understand. Razianna (2015), in her study, states that translation has assisted her student to understand English. According to Charis Ding, the co-founder of My Readers literacy program, some secondary students still failed to master the English language (Malaysiakini, 2017). Prior, this has been highlighted in a study conducted by Hiew (2012), stated that, students had to accept the fact that they have to master English as much as possible. If they failed to do so, then it will be difficult for them to answer the exam questions. However, students still prefer the Malay language since they learned most of the subjects in the Malay during their primary school. Next, according to a science teacher, even if they are proficient in more than one language, it is not easy for them to switch to another language at a glance. Although the content of Science is the same, the terms are different in terms of language. Therefore, the Ministry of Education should look into this matter with immediate effect by increasing the number of DLP teachers so that each teacher will be able to teach Science/Mathematics in one language only. Besides, preparing teaching materials more than one will be burdensome for them. It requires more time, since they have to prepare by themselves and, on top of that, teachers have to ensure that it be in line with the students' level of learning.

Besides, it is found that most teachers have not attended DLP training courses; as a result, teachers are not ready for the change. Nadiah & Melor (2018) in their study stated that teachers are not confident to conduct DLP classes due to lack of guidance. Hence, MOE should provide more intensive training for the teachers so that they can improve their confidence level. Gunal & Demir (2012) stated that for each new curriculum that being introduced, the teachers should get complete guidelines so that the objective of the curriculum is achievable. Besides, most of the schools are not equipped with enough materials and resources to conduct the DLP classes. The ministry also should provide enough

ISSN: 2462 1692 e-ISSN: 2289 8042

Vol. 10, No. 2, (November, 2023)

teaching and learning materials and resources so that teachers can conduct the lessons effectively. Although teachers have been teaching in schools for years, and have attended many conferences/ programs/ seminars/ lectures which related to theirs, they will still face challenges if policy keeps changing each time the leadership change. It is because teachers need some time to understand the policy, practice and to prepare themselves with a new concept of teaching.

Furthermore, changes in education policy will affect students (Norhisham Shamsudin, Norazilawati Abdullah & Noraini Mohamed Noh, 2018). Hence, the ministry should stick to one policy which prepares students for the future. However, some teachers even prefer PPSMI rather than DLP. Teachers believe that PPSMI gives an advantage for them and their students since it allows them to use a mixture of Bahasa Malaysia and English. Besides, the teachers labelled DLP as a programme that prevents students from different classes from communicating with one another. This is because some students learn Science/Mathematics in English, whereas other students learn those subjects in the Malay language. Therefore, students from each class will be proficient in one language only. As a result, students who are learning in Malay might have difficulty communicating with the students who learn in English due to language differences.

Lastly, English language proficiency among the teachers is crucial to facilitate teaching and learning. Professor Dr. Saedah Siraj from Universiti Pendidikan Sultan Idris has voiced her concern over confusion among the students during teaching and learning sessions that can occur due to the lack of language proficiency. She also pointed out that this problem usually arises in the secondary school (New Straits Times, 2019). Therefore, to solve this issue, the schools are advised to organise English courses monthly so that teachers can conduct teaching in English fluently and minimize the use of code-mixing and code-switching to master the English language. Moreover, teachers should encourage students to speak or ask questions in English. When students practice speaking English in the classroom, they can improve their English language skills (Abda, 2017). Thus, teachers will be able to implement Dual Language Programme (DLP) effectively.

With respect to the challenges confronted by the teachers, understanding content and language poses a major hurdle to the success of this programme. As claimed by Racca and Lasaten (2016), teachers who are proficient in the English language will be more likely to perform better in the Dual Language Programme (DLP). If students are unable to comprehend what they learn, this will defeat the purpose of the teaching process. Therefore, according to Domingo (2016), mastery of English precedes an understanding of the subject in the case of integrating content and language learning. Hence, understanding the content and language mastery are a priority for this programme. As this is a dual-language programme, it is suggested that the instructions are provided to students in two languages whereby in both English and the national language for a better understanding. In addition, the Ministry may also consider other suggestions for improvement put forward by the respondents, to further ensure the sustainability of the programme.

ISSN: 2462 1692 e-ISSN: 2289 8042

Vol. 10, No. 2, (November, 2023)

7. Conclusion

Effective implementation of an educational reform requires sufficient training and effective support mechanisms to be provided for teachers who need help. Most primary school teachers stated their concerns that they need a lot of support and supplementary resources in teaching Science and Mathematics using the English language. Teachers indicated that they received little training on DLP as compared to English in the Teaching of Mathematics and Science (ETeMS) (Unting & Yamat, 2017). Teachers need time, resources, continuous professional support and collaboration. The primary school teachers have a difficult task to teach Science and Mathematics through the medium of English. They have to be well-versed with the language of science in order to convey the content and ensure that the learners understand the concepts. This could be made easier when the teacher is familiar with the medium of instruction in which Science and Mathematics is being taught, as the teacher would then have to focus mainly on one aspect, that is, the language of science (Othman & Mohd Saat, 2019). However, if the teachers were not proficient in the medium of instruction, this task would prove even more challenging as the teacher would have to focus on two aspects, which are, being familiar with the language of instruction as well as the language of science. The use of English as a medium of instruction can be difficult and challenging to some of the teachers as they themselves are groping with the English language.

From the researcher's perspectives, there are pros and cons of DLP implementation. The advantage is that it aims to enhance the level of students' English proficiency, whereas the disadvantage is that it can cause confusion among students when they switch to Malay language or English language as their medium of instructions in learning Science and Mathematics. Through the findings of this study also shows how far teachers are ready to face the challenges in today's modern world. Hence, the Ministry of Education should work together with the schools and analysed challenges faced by both teachers and students to make DLP successful. Also, we cannot deny that it requires cooperation from the parents and the community as well. This research does not represent all teachers in Malaysia. Therefore, this study can be intensified using a significant study sample involving teachers from all states in Malaysia, including in urban and rural areas.

ISSN: 2462 1692 e-ISSN: 2289 8042

Vol. 10, No. 2, (November, 2023)

References

Abda, K. (2017). Assessing the Factors that Affect Teaching Speaking Skills: The Case of Robe Teachers' College, English Department Second Year Students. *International Journal of Humanities & Social Science Studies,* 3(5), 285-299.

Anaeto, F. C., Asiabaka, C. C., Ani, A. O., Nnadi, F. N., Ugwoke, F. O., Asiabaka, I. P., Anaeto, C. A., & Ihekeronye, N, (2016). The roles of science and technology in national development. *Direct Research Journal of Social Science and Educational Studies,* 3(3), 38-43.

Ashairi Suliman, Mohamed Yusoff Mohd Nor & Melor Md Yunus, (2017). *Dual-Language Programme in Malaysian Secondary Schools: Are You Ready?* Paper presented at the Seminar Serantau.Malaysia: Universiti Kebangsaan Malaysia

Cheuk T (2012). *Comparison of the three content standards*: CCSS-ELA, CCSS-Mathematics, and NGSS

Darling-Hammond, L, (2012). The right start: Creating a strong foundation for the teaching career. *Phi Delta Kappan*, 94, 8-13.

Dearden, J. (2015). *English as a medium of instruction - a growing global phenomenon.* London: British Council.

Domingo, D. R. (2016). *Content Area Effectiveness: English Vs Filipino Medium of Instruction. PEOPLE: International Journal of Social Sciences*, 2(1), pp. 1514–1529.

Drubin, D. G. and Kellogg, D.R, (2012). English as Universal Language of Science: Opportunities and Challenges. *Molecular Biology of the Cell (Mol.Biol.Cell)*, 23(8), 1399. Retrieved from https://www.molbiolcell.org/doi/pdf/10.1091/mbc.e12-02-0108

Esquinca, A., Piedra, M. T. D. L. and Hererra-Rocha, L. (2018). *Hegemonic Language Practices in Engineering Design and Dual Language Education*. Association of American Mexican Educators Journal, 12(2), pp. 44 – 68

Foyewa, R. A, (2015). English: The International Language of Science and Technology. *International Journal of English Language and Linguistics Research*, 3(5), 34-41. Retrieved from http://www.eajournals.org/wp-content/uploads/English-The-International-Language-of-Science-and-Technology.pdf

Free Malaysia Today, (2019). *Scuffle erupts between PH supporters and NGO in Rantau*. Retrieved from https://www.freemalaysiatoday.com/category/nation/2019/04/11/war-of-words-erupts-between-ph-supporters-and-ngo-in-rantau/

Gunal, O.D., & Demir, C.E. (2012). Implementation of the New Eighth Grade English Language Curriculum from the Perspectives of Teachers and Students. *Procedia Social and Behavioral Sciences*, 47, 1002-1006. doi: 10.1016/j.sbspro.2012.06.769

Journal of Sultan Alauddin Sulaiman Shah
JSASS
Journal of Humanities & Social Sciences
ISSN: 2462 1692 e-ISSN: 2289 8042
Vol. 10, No. 2, (November, 2023)

Herrera, S.G., Cabral, R.M., & Murry, K.G, (2103). *Assessment accommodations for classroom teachers of culturally and linguistically diverse students* (2nd Ed.). Boston: Pearson.

Hiew, W., (2012). English Language Teaching and Learning Issues in Malaysia: Learners' Perceptions via Facebook Dialogue Journal. *Journal of Arts, Science & Commerce*, 3(1), 11-19.

Hu, J. and Gao, X. A. (2018). *Linguistics Demands in English-language Science Textbooks in Hong Kong. The Asian Journal of Applied Linguistics*, 5(1), pp. 170 – 180.

Jesica Gambong Unting & Hamidah Yamat, (2017). Dual Language Programme (DLP): Teachers' Voice. *Proceedings of the 73rd ISERD International Conference, Bali, Indonesia*, 13-14 May (pp. 20-24)

Kershaw, A. M. (2018*). Classroom Practices that Promote or Hinder Proficiency in Academic English Vocabulary*. (Master's Thesis, Dalarna University).

Knight, S. L., Lloyd, G. M., Arbaugh, F., Gamson, D., McDonald, S. P., Nolan, Jr., J., & Whitney, A. E. (2014). Performance assessment of teaching: Implications for teacher education. *Journal of Teacher Education*, 65, 372-374.

Krajcik JS, Sutherland LM (2010). *Supporting students in developing literacy in science*. Science 328:456–459

Liebtag, E., & Haugen, C, (2015). Shortage of dual language teachers: Filling the gap. Retrieved from http://blogs.edweek.org/edweek/global_learning/2015/05/shortage_of_dual_language_teachers_filling_the_gap.html

Macaro, E. (2018). *English Medium Instruction*. Oxford: Oxford University Press

Malaysiakini., (2017). *Some secondary school students still illiterate in English*. Retrieved from https://www.malaysiakini.com/news/383431

Melor Md Yunus, Nur Ainil Sulaiman & Mohammed Amin Embi. (2013). Malaysian Gifted Students' Use of English Language Learning Strategies. *English Language Teaching*, 6(4), 97-109. doi.org/10.5539/elt.v6n4p97

Melor Md Yunus & Saiful Islam Ahmad Sukri, (2017). The Use of English in Teaching Mathematics and Science: The PPSMI Policy vis-à-vis The DLP. *Advances in Language and Literary Studies*, 8(1), 133-142. doi:10.7575/aiac.alls.v.8n.1p.133

Mifsud, J. and Farrugia, J. (2016). *Language Choice for Science Education: Policy and Practice. The Curriculum Journal*, 28(1), pp. 83–104.

ISSN: 2462 1692 e-ISSN: 2289 8042

Vol. 10, No. 2, (November, 2023)

Mokiwa, H. O. and Msila, V. (2013). *Teachers' Conceptions of Teaching Physical Science in the Medium of English: International Journal of Educational Sciences*, 5(1), pp. 55–62.

Mthiyane, N, (2016). *Pre-Service Teachers' Beliefs and Experiences Surrounding the Use of Language in Science Classrooms: A South African Case Study. Nordic Journal of African Studies*, 25(2), pp. 111-129

Nadiah Has Bullah & Melor Md Yunus., (2018). Teachers' Perception on the Implementation of Dual Language Programme (DLP) in Urban Schools, Asian Social Science, 15(1), 24-31. doi:10.5539/ass.v15n1p24

Nair, M. (2019). *Politicians are failing our education system*. Free Malaysia Today. Retrieved from https://www.freemalaysiatoday.com/category/opinion/2019/08/10/politicians-are failing-our-education-system/

New Straits Times, (2019). *MOE urged to intensify training to improve teachers' English proficiency*. Retrieved from https://www.nst.com.my/news/nation/2019/03/467780/moeurged-intensify-training-improve-teachers-english-proficiency

Norhisham Shamsudin, Norazilawati Abdullah & Noraini Mohamed Noh, (2018). Kesediaan Guru Sains Sekolah Rendah Terhadap Pelaksanaan Dual Languange Programme (DLP) [The Readiness of Primary School Science Teachers towards the Implementation of Dual Language Program (DLP)]. *Jurnal Pendidikan Sains & Matematik Malaysia,* 8(1), 34-45.

Nurfaradilla Mohamad Nasri, Sarah Mohamad Yunus & Sharifah Intan Sharina Syed Abdullah (2018). Exploring Dual Language Program (DLP) Science Teachers' Perceptions and Experiences of Curriculum Change. *International Journal of Academic Research in Progressive Education and Development*, 7(4), 303–318.

Official Portal for Ministry of Education Malaysia, (2015). *Surat Siaran Kementerian Pendidikan Malaysia Bilangan 18 Tahun 2015-Pelaksanaan Rintis Program Dwibahasa Atau Dual Language Programme (DLP) Di Sekolah Pada Tahun 2016 [Ministry of Education of Malaysia Number 18 Year 2015 Press Letter Implementation of the Dual Language Program (DLP) at School in 2016]*

Othman, J.& Mohd Saat ,R., (2019). Challenges of using English as a medium of instruction: Preservice Science teachers' perspective. *Asia Pacific Education Researcher*,18(2), 307-316

Racca, R. M. A. B. and Lasaten, R. C. S, (2016). *English Language Proficiency and Academic Performance of Philippine Science High School Students. International Journal of Languages, Literature and Linguistics*, 2 (2), 44–49.

ISSN: 2462 1692 e-ISSN: 2289 8042

Vol. 10, No. 2, (November, 2023)

Razianna Abdul Rahman., (2015). Learning English from learners' perspective. *Kertas kerja Seminar Penyelidikan Pendidikan Kebangsaan ke XII 2015*. Putrajaya: Kementerian Pelajaran Malaysia

Rose, H. and J. McKinley. (2018). '*Japan's English-medium instruction initiatives and the globalization of higher education*'. *Higher Education* 75/1: 111-129.

Snow CE (2010). *Academic language and the challenge of reading for learning about science*. Science 328:450–452

The Star, (2018). *NUTP urges teachers to fact-check DLP*. Retrieved from https://www.thestar.com.my/news/nation/2018/01/05/nutp-urges-teachers-to-factcheck-dlp

The Star, (2015). *Teach Maths and Science in English, says Mahathir*. Retrieved from https://www.thestar.com.my/news/nation/2015/06/13/teach-maths-and-science-in-english-says-mahathir

Unting, J. G. and Yamat, H. (2017). *Dual Language Programme (DLP): Teachers' Voice. In ISERD 73rd International Conference Proceeding*, pp. 20-24.

Yore LD and Treagust DF. (2006). *Current realities and future possibilities: language and science literacy—empowering research and informing instruction*. Int J Sci Educ 28(2–3):291–314

Yunus, M. M., & Sukri, S. I. A. (2017). The Use of English in Teaching Mathematics and Science: *The PPSMI Policy vis-à-vis the DLP. Advances in Language and Literary Studies*, 8(1), 133-142.

Zuraini Ramli. (2014). *Teaching and Learning Mathematics and Science in a Second or Third Language*. Doctorate Dissertation. Deakin University