

# TACIT KNOWLEDGE: THE EXPLANATORY STUDY OF THE IMPACT OF PPSMI TOWARDS ENGLISH FLUENCY AMONG UNIVERSITY STUDENTS

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*Malaysian's former prime minister, Tun Dr. Mahathir bin Mohamad introduced Pengajaran dan Pembelajaran Sains dan Matematik dalam Bahasa Inggeris (PPSMI) in 2003. It is a Malaysian Government policy aiming towards primary and secondary schools in Malaysia with the purpose to improve English fluency among Malaysian pupils. In this policy, Science and Mathematics subject will be fully thought in English instead of the previous Bahasa Melayu. This paper tries to explore the impact of PPSMI towards tacit knowledge among university students to determine the effectiveness of this program whether or not it helps these students with their higher learning pursue in local and private universities among which writing skills, presentation skills, text book comprehensiveness including class discussion period were involved.*

**Keywords:** Tacit knowledge, PPSMI, Knowledge

## INTRODUCTION

The Teaching and Learning of Science and Mathematics in English or PPSMI were implemented in January 2003. Since it was introduced, a lot of issue has arisen and one of it is to revert the two subjects back to Bahasa Malaysia which they (Malay educationists and nationalists) felt that Bahasa Malaysia, being the national language, was relegated to a secondary position in the school education system.

PPSMI is an essential agenda which not only created to improve English proficiency among pupils but to elevate learning and achievement levels in Science and Mathematics among Malays and Bumiputera especially those from the rural areas, which a large number of them are poor in English. This situation should be corrected by the implementation of PPSMI which it will introduce and strengthen the English grammar and word pronunciations among them.

Asmah Haji Omar (1994) stated that improving skills in English literature is one of the essential aspects to achieve Vision 2020 aiming to develop Malaysia into becoming one of world's top industrial countries.

Therefore, PPSMI must be allowed to continue and to be successful in serving its objectives and to realise the vision of our own former Prime Minister Tun Mahathir Mohamed which was to cultivate a generation that will enhance Malaysia's position as a major global socio-economic player.

## **The importance of English in students' learning**

In Malaysia, English is taught in primary and secondary education. Children as young as four years of age (kindergarten) are exposed to the language and this continues into primary, secondary and post secondary education.

Consequence from this, the students encounter no problem in embedded English language in their reading, writing, verbally and therefore communicate effectively in English, given the logical expectation those eleven years in the school curriculum would enable them to master in the language.

However in reality phenomenon, there are still obstacle for the students especially undergraduates students in comprehending lectures and text books, and therefore continuous assistance in English language is required to improve their skills in the area of English language and have a language competence in academic achievement.

Edmondsø (1979) claimed, amongst other things that, not only an orderly atmosphere conducive to learning is of primary importance; there need to be an emphasis on basic skills acquisition (linguistic skills) and frequent monitoring of studentsø progress. This shows that PPSMI is considered as top priority agenda for it covers English language as a basic skills acquisition.

D. Nunan & R. Carter (2002) stated that education through the mother tongue with emphasis on important languages of the world including English is the best; if not the only option we have before us. Therefore the English components in PPSMI are important as it will help undergraduates to read books, writing essay, delivering their own views and opinions and thinking skills.

English language is very important because where ever you go as long as you can speak English you can survive. Some people say that other countries do not speak English language but as long as we are equipped with this language we can survive.

Aziz (2003) stated that this is necessary because language plays an important role in communication, thinking and is a tool for exchanging ideas and concepts between individuals. Furthermore, itø an international importance as many countries nowadays adopted English as the lingua franca for commercial activities for both multinational and private companies.

When English language has been used as a medium of instruction in schools, many learning activities, such as questions and answers activities with their teachers and fellow friends are conducted in English language. Therefore, it improves students' English language.

Rossi and Stringfield (1995) identified several success of implementation of a programme in order to help weaker students in English language. Among them are:

- A shared vision;
- Trust and full participation as well as having a commitment to caring;
- The need for an expanded version of the basic philosophies used in the classroom;
- Achievement testing on a pre/post basis.

The above statement can best describe PPSMI as it has most of the package as what Rossi and Stringfield (1995) derived especially the use of it to help weak students who are having difficulty mastering English language by providing necessary assistance thus enable them to reach the highest educational levels that they are capable of achieving.

### **Teacher's Role**

incultivating the students in English and also to raise the quality of English language teaching, a paradigm shift is essential. The quality of teachers recruited and assigned to teach the language is central to the whole issue.

Dr. Jaafar Jantan (2008) emphasized that success in increasing or improving English proficiency at this level is best done through active learning such as drama, acting out and role playing in the classroom (which I presume without any proof, has and is being done by many concerned teachers). Therefore it has been discussed among professional and academician that a teacher should play a vital role in cultivate English language among students by not only through PPSMI means but it also has to do with other creative ways and instructional strategies (contextual) in classroom activities in the learning of science and math. The traditional ways of teaching should be changed to the modern and sophisticated ways of teaching that is the students need to exchange their turn with their teacher to talk in the class instead of just listening to their teacher.

Not all students can digest all the input they gain from the teacher because based on the research made by Kolb, Dunn & R.Dunn (1974) stated that in Malaysia showed that 87% students and university lecturers in Malaysia are visual learners which they more preferred the teaching and learning process is conducted in the form of pictures, charts, diagrams, videos, and animation compared to only 13% verbal (audio or spoken and textual information) learners. Furthermore, 60% of the students process information best when they involve a lot of self dialogue, asking questions and peer dialogue as compared to only 40% who prefers to do the information processing by store in their minds or what we call as a tacit knowledge. My interpretation on this findings, a good teacher is ones that has the ability to teach in different learning styles and different ways so that if students don't understand a subject for example Math and Science, the teacher will try to solve it by changing the traditional method of teaching that is by giving lecture all the time to something which explain the formulas by using images.

The teacher plays a vital role in cultivate the students to learn English language by having a fluent English command and have the ability to speak the English language in an appropriate way which emphasize on using a good grammar and good sentences.

In order to have a good command in English, the teacher should attend on-going training in the form of in-service training, attending academic seminars and perhaps doing a lot of research so therefore they can present it in conference. From there, it will polish their skills in English.

Regardless than that, the teachers should exposed themselves to listen to news either locally or internationally so that they can have a very good of language listening.

The PPSMI's teachers are the one who should be comfortable in ensuring that the goals and purpose of PPSMI will be implemented. Therefore, the teacher should be much more vibrant and likely to carry the language regardless in the class but also in the surrounding he or she lives. The teacher should have confidence in starting the conversation in English so that the teacher can built confidence among their students in the process of gaining knowledge from their teachers.

Parker Palmer (2007) summarized that good teachers are people who have some sort of connective capacity, who connect themselves to their students, their students to each other, and everyone to the subject being studied. The interpretation on this statement is that as a teacher, she or he should make homework by finding out something about the students she or he is working with. This is to ensure that the teachers know well on each and every one of his/her student and so that they have more common with each other well. Therefore, the teacher will get familiar with the pattern of interaction with each of the students and the communication between student and teacher becomes more open and honest. In addition, the teacher should have an empathy values in which being able to see things from another person's point of view.

As a good teacher in fact all teachers, as long as you have chosen the job, the teacher shall enjoy their work and their students. Teachers who show interest in their work and their students are motivated, energized, and creative and the student will feel understood and appreciated.

As a good PPSMI's teacher is one who not only has knowledge on Math and Science subject but it has to do more on the personality which the teacher requires effective communication skills which convey it in engaging, motivational terms and therefore through communication skills a teacher can introduce creative and effectual problem solving of the student.

### **Tacit and Explicit knowledge**

As Michael Polanyi (1969) wrote in *The Tacit Dimension*, he addresses tacit knowledge as the fact that '*we can know more than we can tell*'. Hodgkin (1991) emphasized that *tacit knowledge* comprises a range of conceptual and sensory information and images that can be brought to bear in an attempt to make sense of something.

From this interpretation, it can be concluded that tacit knowledge is something in one's mind or possesses and it is difficult to transfer, share, and transmit with other person because of the culture, habits and resistance which requires extensive personal contact and trust. It is a knowledge that based on experience and one's observation.

However it can easily transfer if ones have trust to share with others or what we called as a knowledge sharing. Knowledge that is easy to share and easy to communicate is called *explicit knowledge*.

PPSMI has connection with the students' tacit knowledge as it helps and contributes in students' learning processes and their success in academic studies. This is because, with the tacit knowledge that the students have through PPSMI, it will describe practical know-how and it's built upon experience during their years in school.

PPSMI is more like the tacit knowledge basis of apprenticeship programs. From PPSMI, students will have a long-term memory which contained knowledge structures which

includes tacit knowledge itself. As a result, we can conclude that tacit knowledge creates in the long-term memory. To the end that the students have no hassle and difficulties in using English language as a tool in their learning process in the university because the knowledge of how things should be done is there and it's built upon experience during their formative years in school.

Tacit knowledge can only be acquired through practical experience in the relevant context for example 'learning-by-doing'. What they need to do is to share with other individuals so it interconnects to a new knowledge. PPSMI program is a paradigm shift to improve the quality of undergraduate education and influence the quality of students' learning and their educational experiences.

Tacit knowledge is vital due to expertise rests on it, and due to it is the source of competitive advantage, as well as being critical to daily management activities. For that reason, PPSMI is a beneficial program to prepare the students for the future as the student can speak and write in English due to huge massive millions of scientific books and journals written in English. Not only students can improve their English language but to also endow them with more resources since most of the books taught in the university are written and published in English.

Tacit knowledge can be shared (explicit knowledge) through knowledge management practices. It also can be shared by externalization or knowledge transfers as the individual or group of individuals shared knowledge or know-how with each other or within the group.

Another socialization process comes from Nonaka's SECI Model. Nonaka and Konno (1995) have created a model of knowledge creation in this model which consists of four modes.

- 1- Socialization:  
(We need this process in order to learn new knowledge and enable to share, diffuse, disseminate and manage tacit knowledge).
- 2- Externalization:  
(Tacit knowledge becomes explicit knowledge through externalization).
- 3- Combination:  
(Explicit knowledge is shared through a combination process)
- 4- Internalization:  
(Explicit knowledge becomes tacit through this process)

With the tacit knowledge acquired from PPSMI, it encourages them to share their ideas and develop new insights together that will lead to the creation of new knowledge.

Tacit knowledge facilitates the students to familiarize them with the English language and enable the students' learning in tertiary levels to comprehend subjects that are taught in universities.

PPSMI in schools level indirectly encourages students in improving English skills among them. These skills will then be brought forward when they are furthering their studies to the tertiary level and will be used in writing, communication and reading to name a few. Thus, the knowledge and experiences they once got from PPSMI can help them prepare themselves with the new learning environment for an example in the universities whereas

most of these institution utilized English as their main teaching language. The experience these students once had and shared with others is called explicit knowledge.

Explicit knowledge is, on the other hand, is something that can be explained, articulated and codified by individuals. Compared to tacit knowledge, explicit knowledge is a knowledge that is readily to share with other person.

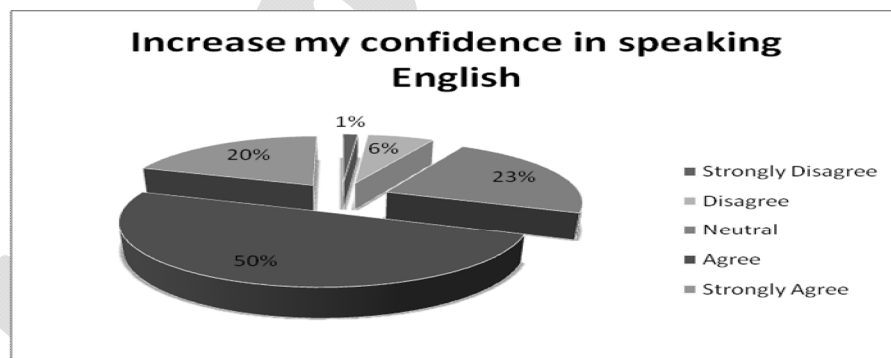
Explicit knowledge is the type of knowledge conveyed through articles, books, seminars, and video presentations. There is no need to have direct experience with something to have explicit knowledge about it. This is one of the criticisms of college students who are just graduating. They have a lot of "book knowledge" (explicit knowledge) but lack real world experience (tacit knowledge). Clearly then we know that no matter how great the explicit knowledge it cannot always replace tacit knowledge.

## FINDING AND DISCUSSION

The survey conducted at UiTM, Kedah which involved 400 questionnaires were distributed but only 278 respondents returned the questionnaires. From 278 respondent, 177 (64%) respondents are from Diploma level while 101 (36%) are from Degree level.

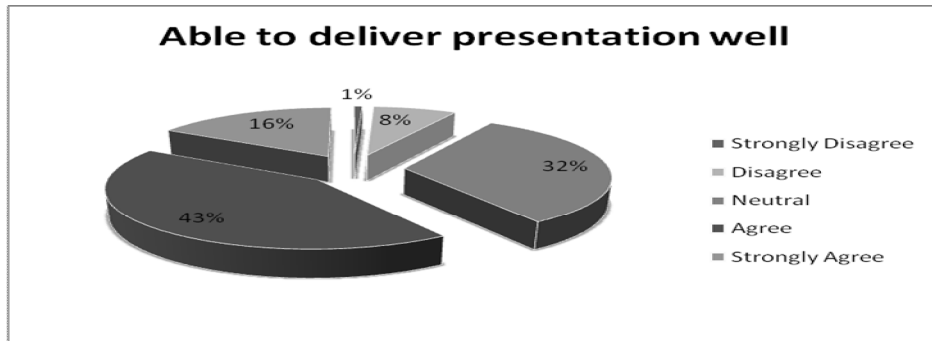
### Findings 1: Confidence Level

**Figure 1:** Increase my confidence level in speaking English



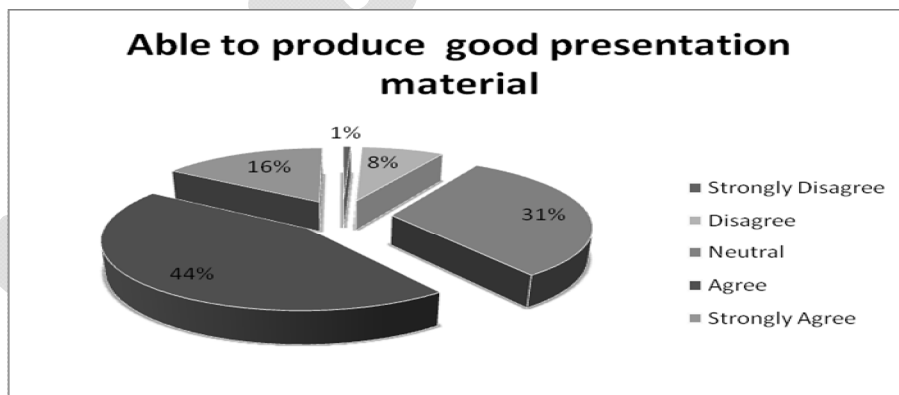
From the survey, 50% or 138 respondents agreed the PPSMI policy was significant to boost and enhance their confidence level in speaking and delivering English well. This is for the reason that PPSMI is not only to elevate learning and achievement in Science and Mathematics but also to improve English proficiency among students. Nonetheless, there was still 1% or 4 of the respondents who chose to strongly disagree.

**Figure 2:** Able to deliver presentation well



As shown in figure 2, the majority of the respondents (43%) agreed that with the implementation of PPSMI policy, it enables the students to deliver presentation well in class. Respondents encounter no problem in embedded English in their verbally as all the learning activities and process used English as an essential language of knowledge. Hence, the respondents have the ability to deliver presentation well and effectively.

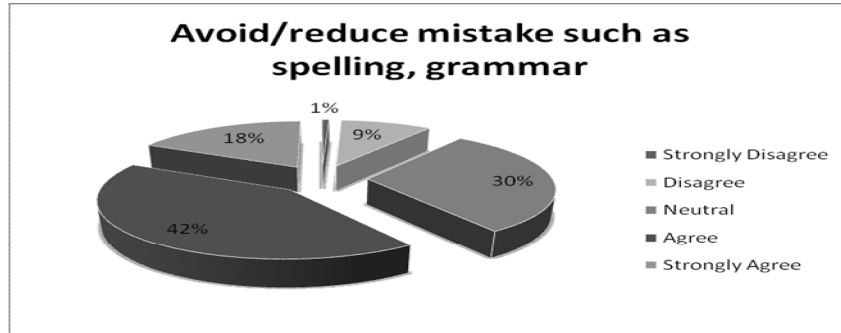
**Figure 3:** Able to produce good presentation material



As illustrated in Figure 3, as many as 123 respondents agreed and 44 respondents strongly agreed with this statement. All in all, 60% of the respondents found this statement as important. This is for the reason that majority of the literature are in English therefore with the PPSMI policy, it helps the students to familiarize with the English language so that they can understand the materials well and hence have the ability to choose a good presentation material.

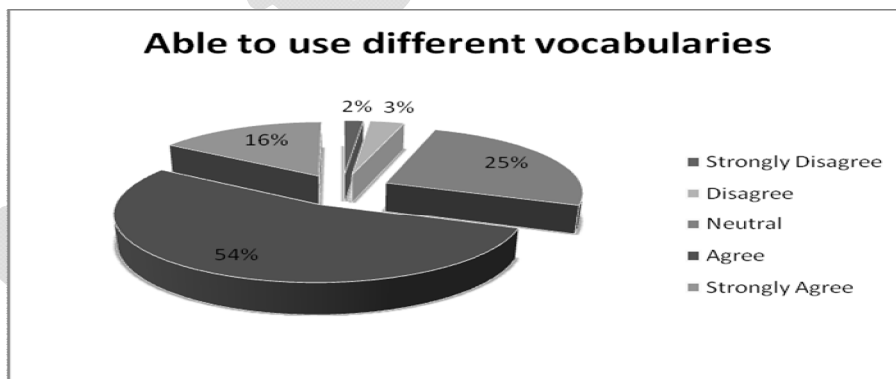
## Findings 2: Writing Skill

**Figure 4:** Avoid/reduce mistakes such as spelling, grammatical error



As illustrated in Figure 4, as many as 117 or 42% of the respondents agreed while 49 or 18% of the respondents strongly agreed that through PPSMI, it indirectly helps the students to reduce mistakes in writing such as in the aspect of spelling and grammatical error. The students have the tacit knowledge or have a basic skill in English. To the end, the tertiary education level students have no difficulties in familiarizing with the grammar and word spelling as they have practical know-how which is built upon experience during their years with PPSMI.

**Figure 5:** Able to use different vocabularies

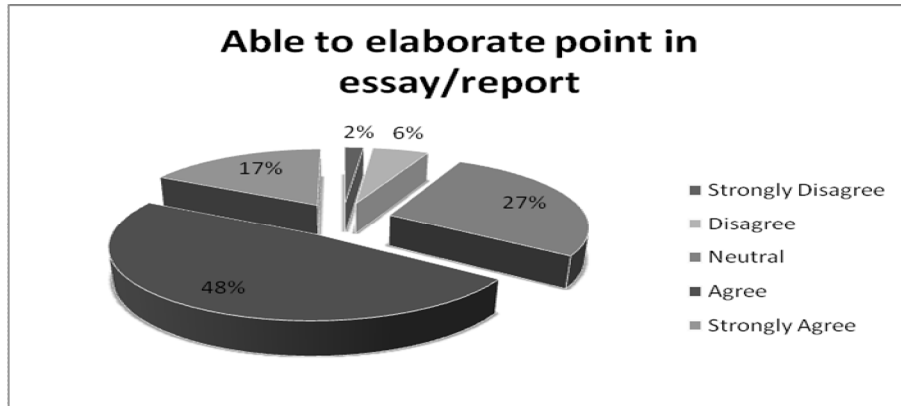


As illustrated in Figure 4, as many as 117 or 42% of the respondents agreed while 44 or 16% of the respondents strongly agreed. This is for the reason that through PPSMI, students were not only can speaks and writes in English but through PPSMI also endow them with more resources in English language. As a result, it exposed the students with huge massive of vocabularies that available in the resources. In addition, through the learning of Science and Mathematics in English, students also were exposed to the huge number of



scientific words. Hence, it helps the students to have sufficient vocabularies to construct simple sentences.

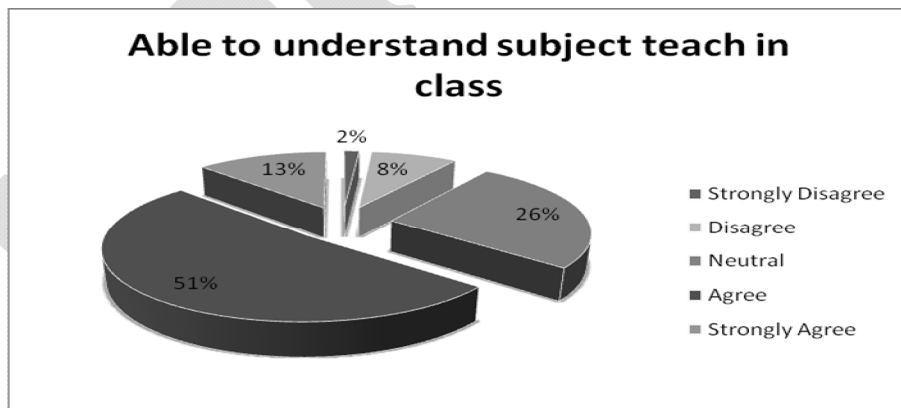
**Figure 6: Able to elaborate points in an essay/report**



As illustrated in Figure 4, 48% or 134 respondents agreed while 17% or 48 respondents strongly agreed that the students are able to elaborate points in an essay. This is taking into account of the student’s abilities to read and write informative material on top of having experience in understanding textbook material which the language is in English.

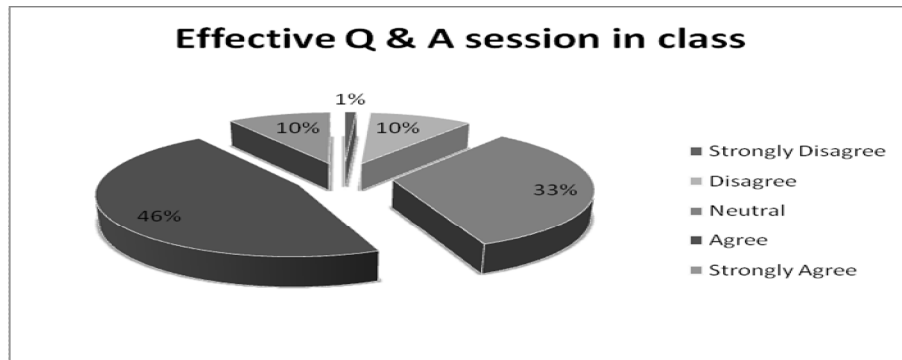
**Findings 3: Class Learning Process**

**Figure 7: Able to understand subject teach in class**



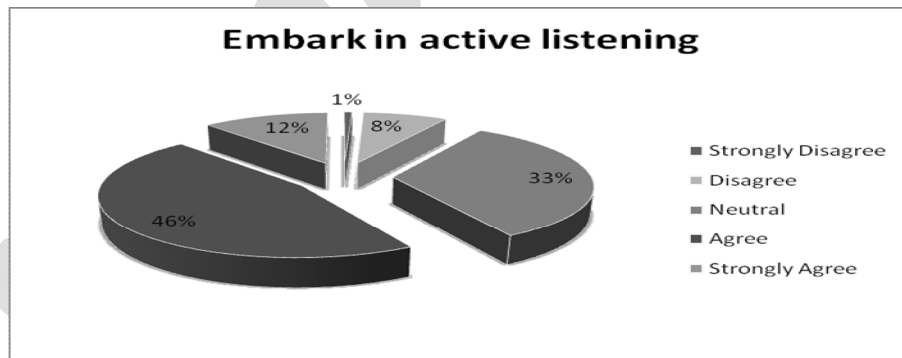
As illustrated in Figure 4, as many as 143 or 51% of the respondents agreed while 35 or 13% of the respondents strongly agreed. Even English language had been taught in primary and secondary education, PPSMI is a good effort which indirectly encourages students to familiarize with the English language and as a result, they were able to understand subject teach in class.

**Figure 8:** Effective Q & A session in class



As illustrated in Figure 4, as many as 129 or 45% of the respondents agreed while 27 or 10% of the respondents strongly agreed. PPSMI is considered as top priority agenda for which it covers English language as a basic skills acquisition. Furthermore, through PPSMI also the learning activities such as questions and answers activities with their teachers and fellow friends are conducted in English language therefore when the students pursue their education to the tertiary level, they have no difficulties in giving an effective Q & A session in class.

**Figure 9:** Embark in active listening



As illustrated in Figure 4, as many as 129 or 46% of the respondents agreed while 33 or 12% of the respondents strongly agreed. The PPSMI students, who are now pursuing their tertiary education, showed that they embark in an active listening in class. This is for the reason that they familiarize and understand the English language and hence cultivate the students to embark in active listening.

And through PPSMI, the students were exposed to the best practices in which they exchange their turn with their teacher to talk in the class instead of just listening to their teacher. Consequently, they were engaged actively throughout the listening process.

## CONCLUSION

PPSMI is a good policy and should be allowed to continue in its present format. It is a good exposure for students especially from rural areas because they don't have exposure of English at home, and therefore they can obtain it at least at their school. Furthermore, majority of the world speaks and writes in English and there's a lot of reading material for instance books, article, journal in either printed or non-printed are in English language. Therefore, the implementation of PPSMI would indirectly encourage students to familiarize with the English language.

Although there are already systems where English language was used in school in helping students in writings, communications and interaction, PPSMI policy is a useful system which it would indirectly encourage students to brush up on their English.

PPSMI had adversely affected our students by helping the students to have sufficient vocabulary to construct simple sentences. With PPSMI being implemented in our teaching and learning system nowadays, younger generations should be able to improve their English. However, the strength in PPSMI was not only affected to the language being used but also the role of teachers in delivering effective messages to the students.

PPSMI makes a vital role for more understanding about the subjects especially in sciences subjects. Many scientific words are in English and cannot be translated into Bahasa Malaysia. Therefore, it helps the students to have sufficient vocabulary in English.

In a nutshell, PPSMI policy is vital for preparing students familiarized with the teaching in the English language during primary, secondary and consequently will facilitate the student's learning in tertiary levels as the subjects taught in universities speaks and writes in English language.

Furthermore, we must always keep in mind that we should see PPSMI policy in a positive view as it facilitates long-term learning. English is important and PPSMI is the right instrument in indirectly helping the students to mastery and strengthening the English as it is a necessity especially in providing graduates to have the ability to converse in English fluently.

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