

## **CHAPTER IV**

### **FINDING AND DISCUSSION**

The data is presented in the descriptive form. In this chapter, the researcher presents the Whole Processes of Teaching and Learning, the Profile of the Teachers, Classroom Activities, Result of Data Analysis, the Interview results, and Discussion.

#### **A. Research Finding**

##### **1. The Whole Processes of Teaching and Learning**

As it has been stated in the previous chapter that the purpose of the study is to find out physics teacher's problems in teaching the subject using English as the medium of instruction in bilingual classes, therefore the researcher observed physics teacher of immersion class who taught using English or bilingual (English and Indonesian) in MAN 1 Semarang. The data source is taken from the real observation and interview.

In this study, the researcher only observed the teacher of second grade because the teacher of third grade now focus on preparing the students to face National Examination (UAN). It is also because the teacher who teach at the second grade of immersion classes are supposed to teach his subject using much more percentage of English than the first grade. Another reason is that the material given to the students of second grade used physical terminology much more than the materials given in the first grade.

The observation was conducted on August 2013. In the observation, the researcher observed the classes of one physics teacher during three meetings of 90 minutes. The researcher just sat on the back seat of the class and watched the teacher in delivering the materials in English. After the observation finished, the researcher held an interview.

## **2. The Profile of the Teacher**

There was only one observed teacher in this research.

Teacher A is about 38 years old. He was graduated from Diponegoro University Semarang in 1998 majoring physics. He continued his S2 degree at Semarang State University in 2011. But he has begun to teach in 2000. He joined at MAN 1 Semarang and taught at the classes of immersion program in 2010. For the time being, he teaches in the first grade and second grade classes.

Teacher A has learned English for one year. He got training at school from the senior teacher who had used English as the medium of instruction in delivering physics. He also got training from UNNES. However, his mastery in English vocabulary and physical terminology is good. His job as physics teacher of immersion program forces him to learn English, especially in memorizing the physical terminologies, more and more.

### **3. Classroom Activities**

Before presented the data analysis of the observation, the researcher gave some descriptions about the classroom activities conducted by the observed teacher in teaching and learning process.

Teacher A has taught in an immersion class for about three years. He has good ability in English. However, sometimes, the teacher had to re-explain the material he has taught using Indonesian to make the students more understand about the material.

When I came to observe the class, he and his students were having study about analysis moving using vector. The class consists of 26 students. Therefore, the class is not too noisy and easy to organize. He prepared the steps in teaching process in doing exercise first in the book. Moreover, teacher A did not need to write the materials on the whiteboard. At this time, he did not explain much about the theory. He even left the classroom and back to the class right after the students finished their exercise. Besides, in the end of the lesson he always asked to his students whether they had any questions or not.

For the second and third of the observation, teacher A had teaching and learning process in the classroom. He started the physics teaching and learning process by greeting his students and then started to organize the class by asking what the previous lesson was, and whether any the difficulties found in the previous

lesson. He also told the students what they are going to do. He could explain the material well and give his students a lot of questions to make them be active and to create two ways communication.

Teacher A who teaches physics hardly ever used power point in presenting the materials which was written in English. He tended to use the handbooks as the guidance in delivering the material. He preferred to make the most of the board in explaining and solving some problems. Sometimes teacher A had some jokes when he delivered his material so that the students were not get bored to the lesson. He also pointed toward one of the students to answer his questions as soon as possible. He used bilingual way of communication whenever he explained the material; he used English first and then translated it into Indonesia. Sometimes he explained it more than once in order to make the students understood.

In fact, teacher A used bilingual language (English and Indonesian Language) in the process of teaching and learning. The teachers had to translate his lesson which has been taught using English into Indonesian language. This condition was not good because both the teacher and the students need more time to finish the lesson.

## **B. Result of Data Analysis**

Based on the real data from voice recording, field notes and interview result, the researcher presented her findings as follows:

### **1. The Teacher's Status dealing with the Training for Teaching in Immersion Classes**

Manual book for establishing the immersion class in Central Java (Diknas, 2004: 12) states that immersion class is the study of one or more subjects using foreign language which is called as companion language.<sup>60</sup> It can be said that in immersion classes, English is used as the companion language.

In immersion classes there are several subjects which must be taught using English as the means of instruction. The subjects are mathematics, physics, biology, chemistry, geography, history, economy, etc. As the subject is taught using English, the teacher should be able to teach using English both in oral and written. In order to be able to teach using English in immersion classes, the teacher joined the 4 month-training for teaching in the classes of Immersion. The training has three stages. They are: (1) General English, (2) English for Instructional Purposes, and (3) Guided Teaching.

The General English training was used for the teacher to learn four skills in English, namely: listening, speaking, reading, and writing. The mastery of listening and speaking is for helping

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<sup>60</sup> Diknas, *Buku Panduan Kelas Immersi dan RSBI Jawa Tengah*, (Jakarta: Depdiknas, 2004), p.12

the teacher in explaining the lesson, talking in front of the class and also listening to their student's questions. While, the mastery of reading is for helping the teacher in reading the lesson and looking for the source of the lesson while the mastery of writing is aimed to help the teacher to make the lesson plan. In this training, it was hoped that the teacher would know in detail about the language aspect: (1) sound system, (2) grammar, and (3) vocabulary.

The next training was English for Instructional Purposes. In this training, the teacher must already master the four skills from the first stages. Whenever the teacher has not mastered the skills yet, there is another way which can be used. The teacher could memorize some expressions and gambits which were often to be used in the classroom and some terminologies dealing with the lesson. The expressions and gambits made by the teacher could be the role model in the teaching and learning process. The way of the teacher speaks is being adopted by the students. During this training, the teacher had to do the peer teaching or practice teaching in group. The steps were the teacher had to make lesson plan, after that the teacher had to teach her own friends (teachers).

The last training was the Guided Teaching. In this training, the teacher had to teach in the real class. It is hoped that the teacher has already mastered the expressions, gambits and the terminology dealing with the subject he taught.

In fact, from data as the result of the interview, the writer found out that the physics teacher have been joined the training for teaching in the classes of immersion.

## **2. The Teacher's Problem dealing with the Syllabus Model and Lesson Plan of Immersion Classes**

The syllabus model of immersion classes was different from those for the regular classes. For immersion classes, the teacher have to make the syllabus using English. It had to be done because English was the main means of instruction for immersion students especially for the second grade.

Based on the real observation of the teacher's syllabus and lesson plans and the interview result, teacher did not make the syllabus for immersion classes in the correct way. Teacher A was able to make the syllabus in English but they still made the syllabus using Indonesian language. However, teacher A tried to make lesson plans in English in order to minimize his difficulty in teaching the subject using English in immersion classes. These lesson plans consist of expressions and gambits which are used during the teaching and learning process in the classroom. The teacher must know how he greet his students, opening the lesson, asking to the students, giving compliments and giving evaluation until closing the lesson.

Furthermore, the teacher usually used the source books which were given from school whenever he taught in classroom.

Teacher A did not make lesson plan in English when he was teaching his subject in immersion classes.

### **3. The Teacher's Problem dealing with the Source Books and Materials of the Lesson**

The source books and materials for the teaching and learning process of immersion program should be in English. It could be the bilingual source or even the Indonesian language source which has been translated into English. The source books and materials should match with the School Based Curriculum. Some teacher got difficulty dealing with this condition.

Referring to the result of the interview, teacher A got difficulty in getting the complete material in bilingual books. The teacher had to find the complete materials of the lesson from Indonesian source books, and then he had to translate it into English. It was difficult because sometimes the translation of the teacher was not grammatically correct. Besides the price of the bilingual books were too expensive. Teacher A also got difficulty dealing with the materials and terminology of the lesson. Sometimes, the material and the terminology of the lesson in bilingual books were not appropriate with the material and terminology used in the curriculum in Indonesia. Teacher A also faced problems dealing with getting the source books because it was hard to find. There were only few books which were available.



From the explanation above, we could see that the source books and materials which were available were not good enough. It was happened because sometimes the books did not appropriate with the curriculum and there were only few kinds of bilingual books for the students of immersion class.

#### **4. The Teacher's Problem dealing with the Teaching Learning Process in the Classroom**

The teaching and learning process was an important thing. This process determined the success of the study. Overall, based on the real observation of teaching-learning process conducted in the classroom, teacher A could handle the class well. He was such a funny teacher so that the students felt comfortable in the process of teaching and learning. He could make a good condition in class. It made the students did not feel worried and depressed in learning physics.

Besides, teacher A's English ability was good. Even though he could speak English properly, he did not always use English during the teaching and learning process. In discussing the theory, he often used English. Otherwise, he used Indonesian language when he was discussing the problems. Besides, sometimes he gave a model to the students about how to read the English words or sentences, and how to read physical symbols.

## **5. The Teacher's Problems Dealing with the Use of English as a Medium of Instruction in Teaching and Learning Process**

English is the main language which is used in immersion classes especially for the second grade. Therefore, the teacher has to master English dealing with their subject. In fact, the teacher got different problem each other dealing with the use of English as his means of communication in the teaching and learning process. By using field notes and the transcript of the teacher's voice recording, the problems dealing with the use of English as a medium of instruction in teaching-learning process are:

### *a. The Proportion of Using English as a Medium of Instruction*

Based on the real data from audio recording and field notes, the researcher presented her findings from the first to third observations which are about the medium of instructions used by the teacher, whether the teacher used English or Indonesian during the teaching and learning process and also the proportion of using English as the medium of instruction in teaching the subject.

The writer used this following table namely Medium of Instruction. This aimed to know the percentage of the use of English as the medium of instruction in delivering physics subject. By using it, the writer can see what language that is dominant as the medium of instruction in physics teaching and learning process.

First, the writer calculated the percentage in using English and Bahasa in the classroom using formula as follow:

$$\% \text{ Language Use} = \frac{\text{Total Certain Language Use in the Classroom (in Minute)} \times 100\%}{\text{Total All Language Use in the Classroom (in Minute)}}$$

Here is the result of the language use percentage:

**Table 2**  
**The Medium of Instructions**

Teacher	Language	Observation (in minute)			Total	Percentage
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
A	English	15'	10'	18'	43'	30.06%
	Indonesia	45'	30'	25'	100'	69.93%
	Total	60'	40'	43'	143'	100%

From the table above, it clearly can be seen that Indonesian language still mostly used by the teacher in delivering the materials. As the medium of instructions, Indonesian language used 69.93.2% while English used 30.06%. Teacher A did not used 60% English during the teaching and learning process. According to Depdiknas (as mentioned in the previous chapter), the teachers should use 60% English in teaching and learning process since they taught for the classes at second grade of immersion. These data leads me to a conclusion that the use of English as a

medium of instruction in delivering the subject was not proportional.

In fact, the teacher still used bilingual instruction (English-Indonesian) in order to make students understand the materials well. Besides that, according to Depdiknas (as mentioned in the previous chapter), the teachers should use 60% English in teaching and learning process since they taught for the classes at second grade of immersion. Teacher A still used Indonesian instruction as follow:

Teacher A: Coba diamati dan dipahami dulu rumusnya.

In the transcript above, teacher A used Indonesian instruction. However, he should used English instruction.

The teacher worries that the students will not understand the concept well if he use full English. Besides, in the beginning of the lesson, the teacher used English to recognize physical terminologies and to explain the theories. After that, in giving examples and solving the problems, the teacher used Indonesian language. It is because the students did not understand well if the teacher often used English in explaining the examples.

b. *The Teacher's Problems Dealing with Pronunciation*

Pronunciation is one of the language elements that should be considered very important in learning English. Besides learning and memorizing a lot of terminologies dealing with the subjects, teachers of immersion class should

also learn how to pronounce that words. It is because their mistakes in pronouncing English words will cause misunderstanding.

On the other hand, in teaching and learning process, teacher A used English less. Sometimes, teacher A made errors in pronouncing English word *second* [sekən]. However, he should be pronounced as ['sek.ənd].

Teacher A also mispronounced the words “*mount*” as follows:

*Teacher A : ... Particel mount responding to velocity equation....*

In the transcript above, teacher A made error in pronouncing the words “*mount*” [maʊn]. However, he should pronounced as [maʊnt].

In fact, Teacher A mispronounced the words, those are: “*second and vector*”. He read those words like he read in Indonesian. It was totally wrong. Those words should be pronounced as ['sek.ənd] and [ˈθætə]

c. *The Teacher’s Problems Dealing with Concept*

The concept here relates to the use of the physical terminology in the sentence or speech, whether it is correct or incorrect. In the class, teacher A made error when he told the students about the dissimilarity between the term “*acceleration*” and “*speed*”. However, Teacher A did not realize that he made mistake. In addition, the students also did

not take into consideration about their teacher's mistake. This condition is not good for the teaching and learning process. Both the teacher and the students should improve their mastery of English in general and physical terminologies in special order to avoid the wrong concept.

## **6. Teacher's Efforts to Solve his Problems in Teaching in Immersion classes**

Returning to the explanation above, there were some of difficulties faced by the teacher who teach in immersion classes. Considering the problems, the teacher did some efforts to minimize his difficulties.

### *a. Teacher's Effort to Solve the Problem Dealing with Syllabus Model and Lesson Plan*

Teacher A did not make the syllabus in correct way. He did not make the syllabus in English but he still made the syllabus using Indonesian language. It happened because he thought it was too difficult and waste a lot of time to make the syllabus in English. However, teacher A tried to solve the problems faced by him by making lesson plans in English in order to minimize his difficulty in teaching the subject using English in the Immersion classes. These lesson plans consist of expressions and gambits which are used during teaching and learning process in the classroom. Sometimes, he also asked another teacher, especially English teacher, about the

right pronunciation of the terminologies dealing with their lesson plan.

- b. *Teacher's Effort to Solve the Problem Dealing with the Source Books and Materials of the Lesson*

Teacher A's main problem was getting the complete bilingual books which were appropriate with the School Based Curriculum. In order to solve the problem, he translated the Indonesian source books into English. He also looked for another bilingual material from the internet. He downloaded some e-book from Australia and England. However, he should choose which chapters are appropriate with the curriculum. He also should pick the physical terminology that best used and appropriate in physics teaching-learning process in class.

- c. *Teacher's Effort to Solve the Problem Dealing with Teaching learning Process in the Classroom*

Based on the real observation of teaching-learning process conducted in the classroom, teacher A could communicate well with the students. Thus, teacher A sometimes asked English teachers in MAN 1 Semarang to make conversation with him in English. He also discussed with other physics teachers about his difficulties so that he can get the solution of his problems.

- d. *Teacher's Effort to Solve the Problem Dealing with the Use of English as a medium of Instruction in Teaching and Learning Process*

Based on the real data, teacher A sometimes got difficulties in pronouncing some physical terminologies in English. He was not pretty good in mastering physical terminology in English and sometimes he didn't know the English term for the physical terminology. Besides, the teacher also sometimes mispronounced some English words. He also made grammatical error when he was delivering the subject. In order to minimize his problem, they asked another teacher about the vocabulary he do not know. The teacher also used bilingual language during the process of teaching and learning for minimizing his error in delivering the subject.

### **C. Discussion**

Immersion Program is a new program in education world of Indonesia. It applies learning process in English. Teachers of certain subjects are demanded to use English in teaching and learning process. Of course, it is not an easy job for them because they are not English teacher who has high level proficiency of English. Furthermore, they have to learn a lot of terminologies deal with their subjects. It is such a difficult thing because it is different from English generally and not all of English teachers come to know those terminologies.

Based on findings stated above and according to the real observation and interview result, the writer concluded that the physics teacher of MAN 1 Semarang still has problems with the use of English



as a medium of instruction in delivering the subject. The problems faced by the physics teacher in teaching the subject using English as the medium of instruction in bilingual classes of Immersion Program of MAN 1 Semarang dealing with syllabus model and lesson plan. The physics teacher did not make syllabus using English for immersion class when he was teaching. It happened because the teacher have already had the syllabi in Indonesian language that the content was the same so that he didn't make the syllabus in English. He also agreed that it took much time to make the syllabus model in English. Moreover, not all of the teacher made lesson plans each time he taught in an immersion class.

In contrast, teacher A made lesson plan each time he taught but he found difficulty in delivering the lesson plan he had been made. It happened because he could not pronounce all physical terminologies dealing with the lesson well. Sometimes, he asked another teacher, especially English teacher, about the right pronunciation of the terminologies dealing with his lesson plan.

On the top of that, referring to the direct and real observation and interview result, the writer also got the data that another problem faced by physics teacher dealing with some of the supplementary books. The supplementary books which were available now were not appropriate with the School Based Curriculum for immersion program. There were few books which were used for immersion program and the contents were not suitable with School Based Curriculum. The prices of the books were also still expensive.

In addition, the writer got the data from the transcript of the voice recording and field notes that in delivering the subject using English as the medium of instruction, physics teacher also got difficulties in terms the proportion of language use, pronunciation, grammar, and concept. The physics teacher used English as the medium of instruction less than 60%. However, the teachers are supposed to use at least 60% of English as the medium of instruction according to the government regulation. Furthermore, the teacher sometimes made error in pronouncing some words. He also often used the wrong grammar in using English as the medium of instruction. Moreover, the teacher also explained the wrong concept in a certain material. This condition happened because of his lack mastery of English. Besides, he is not fluent in English both in orally and writing form, in communicating with his students in the daily life, in teaching using visual and audio visual aid.

These problems appeared because the teacher has not taken immersion program training continuously. The trainings which were held in a very limited time were not effective to give enough information and understanding the immersion program. The teacher should have more training about this.