



**THE TEACHER'S LIVED EXPERIENCE IN TEACHING  
MATHEMATICS AS CONTENT SUBJECT  
AT AN IMMERSION SCHOOL**  
*(The case of Mathematics Teaching and Learning at Tritunggal  
Secondary School Immersion Program)*

**a Thesis**

Submitted in Partial Fulfillment of the Requirements for Master's Degree  
Program in English Language Education

by

Exnasia Retno Palupi Handayani

0203513074

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I **Exnasia Retno Palupi Handayani** hereby declare that this thesis entitled **The Teacher's Lived Experience in Mathematics as Content Subject at an Immersion School** (*The Case of Mathematics Teaching and Learning at Tritunggal Secondary School Immersion Program*) represents my own work, that no one has written it for me, that I have not copied the work of another person, and that all sources that I have used have been properly and clearly acknowledged.

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Exnasia Retno Palupi Handayani

0203513074

## APPROVAL

This thesis entitled **The Teacher's Lived Experience in Teaching Mathematics as Content Subject at an Immersion School** (*The Case of Mathematics Teaching and Learning at Tritunggal Secondary School Immersion Program*) submitted by **Exnasia Retno Palupi Handayani (0203513074)** English Language Education, Master's Degree Program of Semarang State University (UNNES) has been approved for examination on June 2016.

### The Board of Examiners,

Chairman,



Prof. Dr. rer. nat. Wahyu Hardyanto, M.Si  
NIP. 19601124 198403 1 002

Secretary,



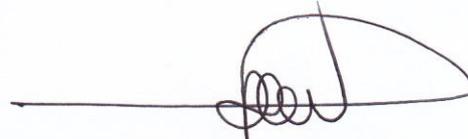
Dr. Januarius Mujiyanto, M.Hum  
NIP. 19531213 198303 1 002

First Examiner,



Prof. Mursid Saleh, M.A., Ph.D.  
NIP. 19440609 197102 1 001

Second Examiner,



Drs. Ahmad Sofwan, Ph.D.  
NIP. 19620427 198901 1 001

Third Examiner,



Prof. Dr. Dwi Rukmini, M.Pd  
NIP. 195110415 197603 2 001

“Life can be understood backward, But it must be lived forward”

(Soren Kierkegaard)

To:

My beloved parents, husband,

lovely daughter, sister,

and all of my relatives,

I love you all..

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Exnasia Retno P.H.

### ABSTRACT

**Handayani, Exnasia R.P. 2016.** *The Teacher's Lived Experience in Teaching Mathematics as Content Subject at an Immersion School (The case of a Mathematics Teaching and Learning at Tritunggal Secondary School Immersion Program)*. Thesis. Graduate program State University of Semarang. Supervisor I: Prof. Dr. Dwi Rukmini, M.Pd. Supervisor II: Drs. Ahmad Sofwan, M.A., Ph.D.

Keywords: Lived Experience, Mathematics, Content Subject, and Immersion

Immersion schools that are available in Indonesia are one of the proofs that the government prepares the Indonesian students to take part in the global competition. The immersion schools are equipped with the better facility to support the students' achievement. In immersion schools, the lessons are delivered in English. However, the Indonesian government has not provided the teacher candidates who are facilitated with English skill. Therefore, the professional teachers who could deliver the lesson in English are limited.

The aims of this study are to describe and explain the mathematics teacher's lived experience in delivering materials using English as the medium of instruction at SMPK Tritunggal Immersion Program. This study describes the teacher's preparation and teaching learning process. This study covers five aspects of lived experience, which are understanding, belief, feeling, intention and action. In this case the problems faced by the teacher as well as the solution are described.

This study used the qualitative approach and the case study as the design of the study. The subject of the study was a mathematics teacher who taught seven grade students at Tritunggal Secondary School Immersion program. To collect the data, the writer used observation and interview as the instrument as well as some related documents as the secondary data.

The teacher's understanding was interpreted through her mastery of the subject of the study and the language acquisition. The teacher believed that she could teach the students well and do her best, however inconfidence, nervousness, and feeling under-pressure of teaching emerged several times. From the teacher's understanding, belief, feeling, and intention, it could influence the teacher's action in the classroom.

Based on the findings, it can be concluded that the teacher's preparation is important for teaching. It brings big influence to the students, especially the students' comprehension of the materials. The school which use English as the medium of the instruction should facilitate the teacher to improve their English. The school could conduct training to make the teacher familiar with teaching content subject in English. The school also could provide a program which facilitates the teachers to improve their English.

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### LIST OF ABBREVIATIONS

1. ACSI      Association of Christian School International
2. BA        Block Assessment
3. CA        Competence Assesment
4. CS        Coordinator Student
5. CBI       Content Based Instruction
6. CLIL      Content and Language Integrated Learning
7. DA        Daily Assessment
8. EFL       English as a Foreign Language
9. ELT       English Language Teaching
10. ESL      English as a Second Language
11. ESP      English for Specific Purpose
12. L1        First Language
13. PPKN    *Pendidikan Pancasila dan Kewarganegaraan*
14. TEFL     : Teaching English as a Foreign Language

## **CHAPTER I**

### **INTRODUCTION**

This chapter describes the purpose of conducting the research. It covers the background of the study, reasons for choosing the topic, statement of the problems, objectives of the study, significances of the study, scope of the study, the definition of terms, and the organization of the research.

#### **1.1 Background of the Study**

Globalization era supports people to learn other languages. Learning the other languages, especially the international language, helps the people to communicate with other people from different country. The international language connects one and another so that they could build good relationship and improve the competition in the globalization era. English as the international language becomes a popular language and easily spread out all over the world because of some factors such as, economic factors, tourism, education, and cultural exchange. Some big countries, which are using English as the first language, influence the other countries to use English as the media of communication. English is listed as the official or co-official language of forty two countries and is spoken extensively in other countries where it has no official status (Genc, 2010:143). Therefore, many people are motivated to learn English and practice it in their daily life. By having good English skill, the people could survive in global competition. They could cooperate with many people from all over the world in

many economic sectors. As result, they are not only improving their economic condition but also increase the economic growth in their country. Moreover, the people also can improve the education system, health care, and many things through new information from international magazines, newspaper, research invention, and cooperation with onther countries.

English is also known as lingua franca because people who have different language background in many countries use English to share their idea and information. The existence of lingua franca provides many advantages to many people. Graddol (2000:16) defines English as lingua franca as the language used for communication by people from different linguistics backgrounds. Therefore, the target model of lingua franca as Graddol has stated is not a native speaker but a fluent bilingual speaker who retains a national identity in terms of accent, and who has the special skills required to negotiate understanding with another non-native speaker.

Many countries use English as the media of communication. This fact is proven by the increasing of English users all the time because not only the natives who use English as their media of communication but also for the people who use English as second language or a foreign language. Graddol (2000:16) defined English users into three circles, namely inner circle, outer circle, and expanding circle. The inner circle refers to the countries which English is the first language. The outer circle refers to the second language countries which English is used as the second language or the official language. The expanding circle refers to

English as the foreign language. The use of English in the expanding circle refers to its function as a lingua franca.

In this case, Indonesia is categorized as the expanding circle user country. Indonesian people use English as a foreign language. The development of English in the outer and expanding circle countries increases the number of speakers for communicative language, including in Indonesia. English as a foreign language is used by many people for their media of communication, especially by the students who study at an international school or the people who speak to foreigner. Many foreigners come to Indonesia for studying in several universities, having investment in several economic sectors, or having vacation since many beautiful places as the tourist destination. That's why the English users in Indonesia always increase every year. It makes the position of English becomes the dominant international language compared to the other languages in Indonesia. We could see the fact from the using of English for scientific journals and references in Indonesia and also in all over the world. Therefore, English is used as the media of communication and information exchange in many countries in the world.

Indonesia as one of the expanding country shows that the government supports the use of English at school. Indonesian government develops a policy which is stated in the Law of National Education System No. 20 Year 2003 Article 33 Verse 3 about the use of foreign language in teaching and learning process. It is said that a foreign language can be used as the medium instruction in a certain education unit to support the students' language competence

(National Education System, 2003). The foreign language is chosen in this case is English.

Many schools in Indonesia adopt English as the medium of instruction in the classroom, especially the international school, national plus, and immersion school. Content and Language Integrated Learning (CLIL) is adopted to improve the students' foreign language proficiency. CLIL brings new insight to improve the education in this country. CLIL has been seen as one such educational approach with this potential (Vazques and Maria, 2013:68). In other words, CLIL can be seen that students learn the language for content subject. They learn the language for specific terms related to their subject at school.

In this case, English is chosen as the language for teaching the content subject. English is the language which dominates the scene, be it as a foreign language in Europe and many parts of Asia, or a second language in North America but also parts of Africa and Asia (Dalton-Puffer, 2007:1). English language and content subject put side by side in learning process. It is more effective for the students to learn the language through the lesson at school because the students practice the language at school every day. The integration content and language is the better way to develop and improve foreign language skills of the students since it is used in daily communication in the classroom. The students can improve their language ability through their habit, always speaks in English at school.

One of the examples of using English for teaching content subject is teaching mathematics in English for international school students or immersion

school students. The students learn the language for mathematics at the same time as they learn the mathematics. It is the same as when they are learning mathematics they are talking and learning in English. The content subject and the language are taught side by side by the teacher. Here, the students' learning of the subject could not be separated from the learning language. It gives advantages for the students because the integrated learning makes the students comprehend two things at the same time. They are not only mastering the subject, but also improving their English skill by practicing the language in the classroom every day.

Immersion schools that exist in Indonesia are one of the proofs that Indonesia adopts English as the medium of instruction in the classroom. Foreign language immersion programs, also referred to as one-way immersion programs, are designed for English-speaking students (Lenker and Rhodes, 2007:1). Immersion school provides better facilities for the students to acquire English skill. The teacher uses English as their instructions for some subjects like mathematics, science, English as a second language, and social studies. In immersion school that I conducted the research, the students use English to communicate during the school ours except when they have subject guided in *Bahasa Indonesia* or other languages such as *PPKN (Pendidikan Kewarganegaraan)*, *Bahasa Jawa*, and *mandarin*. The purpose of the immersion program is to ensure that the students' English proficiency could be increased and improved as the students use it in daily communication in the classroom. Through this program hopefully the Indonesian graduates are able to compete with the

other graduates and survive in the international level. The students are prepared earlier so that they are ready in the global competition.

In order to support this program, the experienced teacher integrates content and language with the special terms or register that is needed. The implementation of CLIL programs requires the content teacher to be responsible for teaching content subjects through the foreign language (Vazques and Maria, 2013:70). The experienced teacher who masters the language is important so that the objectives of this program could be achieved. It becomes crucial if the program is not supported by the experienced teacher because the teacher has important role to reach the goal of education. The teacher could determine the students' achievement in the classroom. Therefore, the teachers for CLIL means that teachers who possess appropriate levels of linguistic competence in the foreign language and knowledge of the subject specialism

In this case, the teacher must be selected based on their knowledge in each lesson that they will deliver to the students, considering the means of teaching is delivering material or guiding the students. Brown (2007:7) stated that teaching is defined as showing or helping someone to learn how to do something, giving instruction, guiding in the study of something, providing with knowledge, causing to know or understand. Therefore, the competent teacher who masters the guided subject would be appropriate to the students. By mastering the content of the subject, have more knowledge, and having ability in delivering the materials, the teacher could transfer their information to the students. The content teachers in an immersion school had to be skillful teachers who are able to teach in English

because they have to deliver the lesson in English. They are the experienced teacher who integrates content with special terms or registers and English as the first foreign language in Indonesia.

## **1.2 Reasons for Choosing the Topic**

As I mentioned in the background of the study above, immersion school needs the competent teachers who master the guided subject in teaching and learning process. However, the teacher also needs to have competence in delivering the material to the students. The teacher's competence in transferring their knowledge is also supported by the comprehension of the language that is used as the medium of instruction. The integrating content and English as the medium of instruction in the classroom encounters some problems for the teacher and students since they have to use English which is different to the general English in teaching and learning process. On one hand, the teacher has to teach the content which should be achieved by the students, on the other hand language development of the students also becomes the integrated language and content teacher's responsibility.

Since this study concerns with the teaching and learning mathematics in immersion school, the skilful teacher is needed to help them in delivering the material. The teacher is chosen by considering background of education, it is related to their major of education, but they can deliver the material in English. Unfortunately, many content teachers are unsure about the way they should perform in the CLIL or bilingual class (Vazques and Maria, 2013:70). Therefore,

the researcher intends to investigate the teacher's lived experience in teaching content subject.

The other reason why the writer chooses mathematics subject is mathematics as one of the difficult lessons which needs more understanding by the teacher and the students. The teacher is not only need to understand the material, to master the lesson but also to memorize the all the mathematics terms. The teacher has to comprehend the language for mathematics that is different to English in general. The teacher also need to learn the formula and find the most effective way to teach the students. The teacher is supposed to be skilful in delivering the lesson to the students so that the students can understand the lesson while improving their language competency. Therefore, the two goals of teaching mathematics in English are achieved in the same time. The students master the lesson and the language.

### **1.3 Statement of the Problems**

The main goal of this study is to describe and interpret the teacher's lived experience in teaching mathematics at immersion school. Therefore, the questions of this research are stated as follow:

1. What is the teacher's lived experience in teaching mathematics in English at Immersion school?
2. What are the problems faced by the teacher in teaching mathematics in English at immersion school?

3. How does the teacher solve the problems arise in teaching mathematics in English at immersion school?

#### **1.4 Objectives of the Study**

This research observes teaching mathematics at immersion school. Therefore, purposes of conducting this research are:

1. To explain the meaningful lived experiences of the Mathematics teacher in teaching Mathematics using English as the media of instruction at immersion school.
2. To find out the problems that teacher has in teaching mathematics in English.
3. To explain the solution given by the teacher in solving the problems through the teacher's lived experience.

#### **1.5 Significance of the Study**

The researcher hopes the research will have the following significances:

1. Theoretically, this study will give a brief description about teaching mathematics in English and show the essential of teaching mathematics in English through research participant's lived experience.
2. Practically, this study will be useful as informative documented input or consideration for immersion school. This research benefits the research participant to be more aware of the use of English as the media of instruction for teaching mathematics which will lead the content teacher especially

Mathematics teachers to be more autonomy, empowerment, and self-actualization.

3. Pedagogically, this study will be useful for the teachers who will teach content subject, especially Mathematics teacher.

### **1.6 Scope of the Study**

From the identification of the problem above, a number of limitations are needed to answer my research questions. This study will limited into a small scope. It focuses on the teacher's lived experience who teaches mathematics in English at immersion school. The researcher will not discuss all aspects of lived experience, it is only five aspects will be discussed. They are understanding, belief, action, feeling, and intention. The researcher also will not interview all of the teachers as the participants. The researcher only chooses one of the teachers who teach mathematics at immersion school.

### **1.7 Definition of Terminologies**

To avoid misunderstanding and misinterpretation among the readers on the terms used in this thesis proposal, it is necessary to define the key terms. The terms used in this study are as follow:

#### **1. Teacher**

As indicated by the *Oxford Advanced Learner's Dictionary (eleven edition)*, teacher is a person who teaches, especially in a school. In this case, the

teacher is the person who teaches mathematics in an immersion school and delivers his/ her material in English to the students in the classroom.

## **2. Teaching**

Brown (2007:7) stated that teaching is defined as showing or helping someone to learn how to do something, giving instruction, guiding in the study of something, providing with knowledge, causing to know or understand.

## **3. Lived Experience**

The word ‘lived experience’ refers to the mixed senses of the last events and the events which are happening now (Bradley, 2002: 13). Lived experience did not only refer to sets of past events but also refers to what human beings are constantly at work to make meaning of what is going on around and ‘within’ them, a process that mixes memory including understanding, desire, intention or expectation, anticipation, relation with others, cultural patterns, feelings, belief or sights, behaviors, smells, sounds etc.

## **4. Mathematics**

As by the *Oxford Advanced Learner’s Dictionary (eleven edition)*, mathematics is the branch of science concerned with number, quantity, and space, either as abstract concepts.

## **5. Content Subject**

As indicated by the *Oxford Advanced Learner’s Dictionary (eleven edition)*, a subject (as history, geography, science) studied in order to acquire a certain body of information rather than to achieve competence in a skill. While Halbach

(2012:34) stated that content subject is teaching content through a foreign language.

## **6. Immersion**

Murcia (2001:305) stated that immersion model of foreign language education is perhaps the prototypical content-based approach. Immersion education is a type of foreign language instruction in which the regular school curriculum is taught through the medium of the foreign language (Richards and Rodgers, 2001: 206).

### **1.8 Organization of Thesis**

This thesis consists of five chapters; they are chapter one to five. Each chapter has own characteristics and purposes.

Chapter I is introduction. This part presents the introduction of the study. It includes the background of the study which captured the basic issues and reasons of the investigation of teachers lived experienced in teaching mathematics at immersion school. This chapter also consists of reason for choosing the topic, statements of the problems, objectives of the study, significances of the study, scope of the study, the definition of terms, and the organization of the research.

Chapter II is review of related literature. It presents review of related literature includes previous studies that related to the current study and theoretical review which elaborates the relevant literature about the theory that shapes the study, particularly to do with teacher's lived experienced in teaching mathematics at immersion school.

Chapter III is method of research. This part presents the design and methods of the study. It includes participants, data collection and analysis.

Chapter IV is findings and discussions. It presents the analysis of the teacher's lived experienced in teaching mathematics at immersion school. This chapter also talks about the findings and the implication of findings towards teaching and learning English.

Chapter V is conclusions and suggestions. It presents the conclusions of teachers lived experienced in teaching mathematics at immersion school. This chapter also has suggestions to the teacher and all people who concern in teaching and learning English.