

CHAPTER I

INTRODUCTION

1.1. Background of the Study

Education is an important part in life. A good education means a good future, therefore most parents send their children to the best school for the best education. The best education at school means having a good quality which is carried out through various efforts such as, updating curriculum development, various pedagogical skill, effective teaching materials, and an ongoing assessment system that supports good instruction.

To guarantee quality education, government of Indonesia establishes Piloting School of International Standard (RSBI) since 2006. In such schools, English is used as a medium of instruction, particularly in Mathematics and Science subjects. Such a practice is referred to as a bilingual program as far as RSBI is concerned.

Nowadays, the issue emerged that RSBI program is removed from national school program at mass media insistence. According to them, there are several disadvantages due to the existence of RSBI program. Besides the existence caste in society, bilingual school like RSBI has expensive cost. This school also needs teachers who have competence in English, especially Math and science teachers. This problem deals with money because they need an English course/training. As a matter of fact, RSBI program has not been removed formally and still, there are several advantages of the existence of RSBI that can be applied. Therefore, this

research is made to give a solution by integrating Mathematics content into English subject.

In bilingual program in Indonesian school, some subjects (Mathematics and Science) are taught through bilingual teaching. Richard-Amato (2003: 357) mentions that the goal of bilingual program is to enable students to function effectively in the fundamental skill areas such as speaking, listening, reading, and writing. Therefore content teachers must have the competence in English language skills to convey the lessons and materials in classroom activities with the goal is to enable students to function speaking, listening, reading, and writing effectively.

Some writers have described about bilingual teaching. *Pembelajaran bilingual adalah salah satu ciri yang membedakan sekolah Rintisan SBI dengan sekolah non-RSBI (Ditat Pembinaan Sekolah Menengah Pertama, Depdiknas, 2007: 42)*. Non-RSBI schools have not used bilingual teaching in teaching learning activities. Bilingual teaching is to teach non-language courses in non-mother tongue totally or partially (Puwen Zhu: 2001, in Bin and Qing, 2008). Some subjects such as Mathematics, Physics, Chemistry, Biology, and Economics should be taught in English, even though there are some subjects that are still permitted to be taught using Indonesian. In some countries that have developed bilingual teaching program like America, bilingual teaching is proposed to help non-native students (immigrant students) to follow other subjects.

In the United States of America, researchers A. U. Chamot and J. M. O'Malley (227-47) have developed a new program named CALLA (Cognitive Academic

Language Learning Approach), which tries to achieve the development of a linguistic capacity in English as a teaching of mainstream subjects such as Social Sciences, Mathematics, and Sciences, in a foreign language. The program is followed by students of limited language proficiency who attend special English classes. For them, English takes part as a second language, while for Indonesian students English takes part as a foreign language. Because of the differences of role and position, the implementation of bilingual teaching in Indonesia which practice teaching content subjects, particularly in Mathematics faces difficulties.

(Ovando, Combs & Collier, 2006) state that there are some programs in America that are given name differently based on the purpose, place, and or technical implementation for immigrant students in order to follow content subjects. For example (1) English as a Second Language (ESL) Content or Content ESL, (2) Sheltered Instruction, (3) ESL Pullout, (4) Transitional or Early-Exit Bilingual Education, (5) Maintenance or Late-Exit or Developmental Bilingual Education or it is also called as Content Based Instruction, and (6) Two-way Bilingual or Dual-Language Education. The programs from number 1 until 3 are categorized as the old programs that emphasize the aspect of English teaching as second language used to teach content subjects. Whereas from number 4 until 6 are categorized as the new programs that emphasize the aspect of content subjects teaching are taught in English or the students' first language. The content subjects are integrated with English teaching principle and are conveyed in English subject. In Indonesia we use bilingual teaching program to teach content subjects in English, but this program is not effective yet because of the ability of content

teachers to convey their learning material in English is inadequate. Therefore, switchcode and mixcode are occurred in the bilingual classroom, which use two languages at once in turn (Ardiansyah, 2012).

The problems emerged when English is used in teaching content subjects. Most teachers have difficulties in bilingual teaching. Besides they have to learn their subject materials, they also have to learn the terms in English. “As introduction language subjects at schools in Indonesia, the use of English causes difficulty to receive the subject material and interaction with teacher” (Coleman: 2011). That means content teachers need to prepare much more than English teacher itself. An article from The Jakarta Post online on Wednesday, 60th October 2009 notes that teachers in Jakarta may not be ready to use English in teaching subjects. This is also acknowledged by M. Marcellino, Ph.d who states that the ability of the teachers in delivering lessons in English is really poor. Some English teachers even still struggle to teach a content subject in English.

Based on the problems above, bilingual schools seem to have many problems. The writer tries to cope with those problems by developing instrument to evaluate Content-Based Instruction (CBI) particularly for teaching Mathematics which is integrated into English subject. The election of Mathematics term as a content subject is based on a close relationship between English and Mathematics subject. The result of a research concluded that students’ achievement in Mathematics subject are influenced by their acquisition level in language skill, especially in receptive skill that are listening and reading (Grant, Cook and Phakiti, 2011).

Nevertheless, the research can be administered in a wider context, not only limited in Mathematics subject.

Content based instruction (CBI) is a teaching method of combining language and content learning. Some writers have defined the definition of content and content-based instruction (CBI). Chaput (1993) defines content as “any topic of intellectual substance which contributes to the understanding of language in general, and the target language in particular.” In this view, the goal of using content in a classroom is for learning the language. Crandall and Tucker (1990) describe content as “academic subject matter” while Torras (1991) expresses Content-Based Instruction as “an integration of language learning materials (language subject) and other subject matter (content subjects), which generally are math or science (IPA), and IPS. Two subject matters that have been integrated then are taught the introductory foreign language.

According to Metzler’s (2000), teaching model definition was used:

”A comprehensive and coherent plan for teaching that includes a theoretical foundation, statements of intended learning outcomes, teacher’s content knowledge expertise, developmentally appropriate and sequenced learning activities, expectations for teacher and student behaviors, unique task structures, assessment of learning outcomes, and ways to verify the faithful implementation of the model itself.” (p. 12)

There are some teaching models of CBI types according to Stephen Davies, such as the sheltered model, the adjunct model, and the theme based model. The sheltered of CBI is a model which learners are given special assistance to help them understand regular classes. It has been used successfully at the bilingual University of Ottawa, where classes are taught in English and French, (Briton,

1989). Two teachers, one as a content specialist and the other as an ESL specialist, can work together to give instruction in a specific subject in a classroom activities. They may teach the class together or the class time may be divided between the two of them. This kind of team teaching needs teachers to work together to plan and evaluate classes.

Adjunct classes are purposed to prepare students for "mainstream" classes where they will join English L1 learners. These classes are usually taught by ESL teachers. Adjunct classes may similar with EPA or ESP classes where the emphasis is placed on acquiring specific target vocabulary. Theme based CBI is usually found in EFL contexts. Theme based CBI can be taught by an EFL teacher or team taught with a content specialist. The teacher(s) can create a course of study designed to open and create on students' interests and the content can be chosen from a wide number of different topics.

The writer wants to figure out the right instrument to evaluate Mathematics content into English subject without adding English teacher's teaching time. Content based instruction (CBI) is expected to be the right way of teaching method of combining language and content learning, particularly theme based CBI where it works in EFL context.

According to Stephen Davies:

"I believe its use will increase as teachers continue to design new syllabi in response to student needs and interests. As I said at the beginning, I believe that learner motivation increases when students are learning about something, rather than just studying language. Theme based CBI is particularly appealing in this respect because teachers can use almost any content materials that they feel their students will enjoy."

The use of theme based CBI helps students and Mathematics teachers with ease because the term is already learnt in English subject. Mathematics teachers in a certain level do not have to teach their content materials in English. Therefore, CBI can be used to support bilingual teaching in Mathematics or even other subjects. This interest has now spread to EFL classrooms around the world where teachers find out that students like CBI and are excited to learn English this way.

1.2. Research Question

Based on the background of the study above, this study focuses only on:

How is instrument of evaluation developed to evaluate the CBI in which Mathematics content is integrated into English subject?

1.3. Research Purpose

The purpose of the study is to develop instrument to evaluate the CBI in which Mathematics content is integrated into English subject.

1.4. Scope of the Study

The study focus on the developing instrument of evaluation to evaluate Content-Based Instruction (CBI) in using Mathematics term as a content subject in English teaching.

1.5. Significance of the Study

This study is expected to give benefit in improving the quality of teaching English in bilingual school and to be used in supporting bilingual teaching and learning in Mathematics subject. This study is also would not decrease our nationalism, because the teacher who will teach Mathematics term in English is the English

teacher itself, while Mathematics teacher keeps teaching the materials in bahasa Indonesia. In a wider context, the result of this study is expected to support bilingual teaching in others subject besides Mathematics.