

PREPARATION AND STRATEGIES APPLIED BY TEACHERS OF MATH AND SCIENCE IN ENGLISH OF BILINGUAL PROGRAM AT ELEMENTARY SCHOOL

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Abstract

This paper is focused on the teachers at elementary school who teach other subjects in English namely math and science at bilingual class program. The main matter is what are their strategy in preparing their selves to teach other subjects. And how they solve the problem and difficulties during the teaching other subjects. This research can be a good share and information about helping teachers teach other subject in English. This is a qualitative research. There are 2 teachers as respondent of this research. They are observed and interviewed. Then, the data are analyzed descriptively. The data are categorized and percentage. Finally the data were discussed. The result of this research shows that both of the teachers do some preparation before presenting the material in English such as make some notes on important vocabulary that will be taught in the class. The, the way they handle the problem by repeating some instruction in order to make the information reached the point. In addition, they need to arrange their lesson plan well in terms of bilingual action in English and Indonesia. They have to consider many aspects of students' condition and their need in the subject.

Keywords: Preparation and Strategies, Math and Science in English, Bilingual Program.

A. Introduction

Bilingual education is the practice of teaching the core subjects in at least two different languages as the media of instruction (Subadi, 2009). In bilingual education where English is used as a second or foreign language, the students are taught math and sciences in the foreign language and social studies in their native language (Williams, 2009). In addition, Bilingualism is often defined as being able to speak two languages, while bilingual teaching most subjects in school through two different languages. Furthermore, basically, in bilingual teaching, English is applied as medium of instruction in teaching and learning process.

The application of bilingual program Indonesia has been popular in many schools of various levels Elementary school up to Senior high school. After the Pioneer of International Standard School (RSBI) was stopped by government of Indonesia in this case "Mahkamah Konstitusi", some ex RSBI school keep using and applying the bilingual program for certain subjects include in SDN 1 Lalebata Palopo. In Elementary school of Lalebata Palopo, the subjects that are still taught by bilingual class namely math and IPA (science). There are some reasons for continuing the bilingual

program namely to produce graduates whose command of English is high and to produce graduates who have high competence in several subjects. In addition, bilingual education programs in Indonesia are becoming popular and many parents are very keen on sending their children to these bilingual class. Furthermore, parents believe that bilingual classes can provide their children with better education because these classes are equipped with better facilities and technologies and more qualified teacher.

In line with bilingual education concept especially the teaching of science and math in English, CLIL is other term that refer this matter. Content and language Integrated Learning (CLIL) refers to the methodologies used in teaching situation where a second language is used as medium for teaching non- language content. Uncovering CLIL has been written to act as guide for both language and subject teachers to the various methodologies and techniques involved in CLIL, the learning of both content and a foreign language can be combined into a single educational process. Mehisto et al (2008) mention that the essence of CLIL is integration which has a dual focus: (1) that language learning is included in content classes (Math, Science, Geography, history, etc). This means repackaging information in a manner that facilitates understanding by presenting charts, diagrams, drawings, tables, etc. and (2) that content from subject is used in language learning classes. This means that the language teacher, working together with teachers of other subjects, incorporates the vocabulary, terminology and text from those other subjects into his or her classes. Students learn the language pattern they need to understand and use the content.

Furthermore, Pavesi et al (2001) states that CLIL is an innovative approach to learning, a dynamic and motivating force with holistic features. It constitutes an attempt to overcome the restraints of traditional school curricula, ie. The teaching of individual subjects, and represents a shift towards curricular integration. Content and Language Integrated Learning (CLIL) is a general expression used to refer to any teaching of a non-language subject through the medium of a second or foreign language (L2). CLIL suggest an equilibrium between content and language learning. The non-language content is developed through the L2 and the L2 is developed through the non -language content. CLIL aims to create an improvement in the second language competence and development of knowledge and skills in the other non language area.s. In order for this to occur, it is necessary to create adequate condition both from the point of view of organization and teaching. When CLIL is introduced some rearrangement of content, language or timing may be necessary. Moreover, using the foreign language to grasp non language content requires a depth of processing which leads to improved language acquisition. Learning is at least partly a problem-solving

activity and CLIL requires learners to solve problems through the foreign language.

In addition, Marsh (2000) states that since CLIL is about using the language to learn and learning to use languages its emphasis is on language learning rather than on language teaching. In addition to the increasing the students' exposure to the foreign language, CLIL also contribute to the development of cognitive abilities; in fact, in bilingual context, learner process concepts at a deep level and can better internalize and retain information. CLIL offers opportunities to allow youngsters to use another language naturally, in such a way that they soon forget about the language and only focus on the learning topic. In CLIL, the learning of language and other subject is mixed in one way or another. This means that in the class there are two main aims, one related to the subject, topic or theme, and one linked to the language. This is why CLIL is sometimes called *dual-focused education*.

One of the aspects that important in bilingual education is the teachers. The teachers in language classroom has many important role Scarlcella and Oxford in Wello (1999) also highlight the most essential roles of English teachers in general as follows:

- ❖ Information-gatherer, in response to their students ever-changing needs, teachers constantly collect information about learners, analyze their language behavior, and observe ongoing interactions.
- ❖ Decision maker, teacher make decision on a moment to moment basis such as to plan flexible learning experiences and to response sensitively to learners of differing language ability levels and varying backgrounds, interest, and needs.
- ❖ Motivator, teachers motivate students to acquire English, in order to arouse and maintain their student intersts. They provide stimulating. Interesting lessons that respond to emotional, cognitive, and linguistic needs of the learners.
- ❖ Facilitator of group dynamics : teachers have strong skills in group dynamics that help them to provide efficient classroom routines and smooth transitions (individual, pair , small group, and large group of work) to encourage specific types of learning.
- ❖ Provider of large quantities of authentic English input and opportunities to use this input: teachers provide students with extensive exposure to English through readings, lectures, movies ,films, audiotapes and so on.
- ❖ Counselor and friend : teachers know when to serve as counselors and friends. They s provided emotional support and help learners feel secure and confident about second language learning.
- ❖ Provider of feedback : teachers monitor students learning progress regularly. The feedback that they provide learners is timely and constructive. Student value the incentive that teachers regularly provide.

- ❖ Promoter of a multicultural perspective : teachers expect their students to take a multicultural perspective. They encourage students to be tolerant of culture conflicts. To respect those of diverse cultures and to avoid stereotyping others.

All of the roles described above are the ones the teachers should perform in addition to other essential roles such as course designer, material writer and administrator. In sum, teachers, include in bilingual program, in addition to teaching , play essential roles as facilitator, evaluators, course designers, material writers, motivator, decision makers, and even as counselors and friends. Pillai (2005) Bilingual education requires of number of trained teachers who are proficient in both English and their native language, in which English is one of the mediums of instruction in most cases. Related to the responsibility as bilingual teachers, the teachers need to prepare and to apply some strategies in order to achieve the target of bilingual classroom. In this paper, the writer presents the preparation and strategy applied by bilingual teacher at SDN 1 Lalebata Kota Palopo.

B. Method

This study applied a qualitative research method. The researcher used a case study design as an ideal design to understand and interpret observation of educational phenomena (Merriam, 1998). There were 2 teachers as respondent of this research. One was Math bilingual teacher and one was IPA science Bilingual teacher at SDN 1 lalebata Palopo. They were observed and interviewed. Then, the data were analyzed descriptively. The data were categorized and percentage. Finally the data were discussed.

C. Findings and Discussion

Some findings has been found in this research related to the teachers preparation and their strategies in teaching math and science in English at Bilingual Program at Elementary school in Palopo.

1. Preparation:

As the lesson guideline, lesson plan plays an important role in teaching and learning process. Therefore, both of the bilingual teachers stated that they need to prepare their lesson plan creatively before teaching. They have to make good outline and decide the strategy that they should use in their classes. Then, it is very helpful if they bring their notes to the classroom. As Brown (2001) suggests that teacher is not supposed to forget what he/she should bring with before he/she starts teaching because what he has planned can be useless. In SDN 1 Lalebata Palopo, the teachers should bring it to the class to make sure that the plans will be running well. Reading some references related to science

and math for bilingual program is also important for them to be done before teaching, they sometimes searching those materials from internet. In addition, in preparing their material in English, especially for IPA science teacher, she needs to download some pictures that related to the concepts that she is going to teach.

Related to the vocabulary improvement, both of the teachers prepare word list before teaching. Sometimes they make word list in cards forms. They use those cards as warming up activities or fun activities. They make the word list based on the target in lesson plans. Then, the other thing that the teachers prepare namely the language instructions that they will use in their classes. Based on the rules in SDN 1 Lalebata Palopo, in bilingual program, each level has different portion for English and Indonesian use in bilingual program, for the four grade, the portion of English is 30% while Indonesia 70%. Then, for the fifth grade the portion for fifth grade is 40% in English and 60% in Indonesian. For the sixth grade, English is 50% and Indonesian instruction is 50%. Both of the teachers prepare some instructions sentences in order to make their students are easier to understand the material.

2. Strategies:

In teaching Math and IPA science at Bilingual program, the writer found some strategies that both of teachers used during their class sessions based on the interview and observation data. In the opening class, the teachers greet their students and try to create positive and joy atmosphere in the classroom by conducting warming up or what they call fun activities. In fun activities, they make some simple game activities. This fun activities aim at developing students' motivation and learning and also to introduce some new vocabularies related to the material that will be learned. The fun activities such as missing vowel games, jumping words, arranging letter and arranging pictures. In line with the fun activities at the beginning of teaching, Usman (1990) suggests that the opening stage can help the teacher to create pre condition of the students in building their mental and attention to focus on what they are going to learn. By motivating students through fun activities, it can increase the focus and the achievement of the students in learning. It is in line with Krashen (2002) who states that learner with high motivation, self confidence, a good self image, and a low level of anxiety are better equipped for success in other language acquisition. In this case the students of bilingual program can catch the English term and they can understand easily the concept of math and science since they are motivated in learning.

Drilling is one of the strategies that applied by both of teachers in teaching math and science in bilingual program. During the teaching time, both of the teachers are using their vocabulary list to introduce the new vocabulary to the students. They teach how pronounce the words in English by giving direct

example through video or the teachers read aloud those words in the list. They ask the students to repeat after the teacher. Sometimes teachers mention the vocabulary in Indonesian then the students translate into English. In addition, the teacher sometimes use pictures in drill activities by showing them the pictures, then the students mention the name of the things in English. This strategy is in line with what Brown (2001) states that the teacher had to be the “language model” because the students needed to hear the “repetition of the language” in use so that they will memorize it and will know when they need to use it.

In explaining some specific terms and concept in English, both of the teacher use some technology media such videos. Then, they present the definition through power point or flash media. They said that their students are very happy when they watch the videos. In addition, the students are motivated to learn when they are taught by technology tools. The teachers always download some youtube video to be played in the classroom. This strategy in line with Downes (2003) in Failasofah (2012) states that the best way to increase a students’ vocabulary, or mental lexicon, is to engage the students the students with meaningful text that are both self and teacher selected.

Furthermore, during the learning process, based on the observation data, both of the teachers use grouping, pair and individual activities in the classroom. The teacher consider that the activities should be in various form since every form of activities has the advantages. There are any number of teaching strategies that can be employed to actively engage students in the learning process, including group discussions, problem solving, case studies, role plays, journal writing, and structured learning groups. The benefits to using such activities are many. They include improved critical thinking skills, increased retention and transfer of new information, increased motivation, and improved interpersonal skills.

The strategy that the teacher apply in making the students active in learning process namely by applying punishment and rewards in their classes. They give rewards to the students who get good achievement during learning process and they give punishment to the students who do bullying or noisy in the classrooms.

D. Conclusions and Suggestions

The result of this research shows that both of the teachers do some preparation before presenting the material in English such as make some notes on important vocabulary that will be taught in the class. Then, the way they handle the problem by repeating some instruction in order to make the information reached the point. In addition, they need to arrange their lesson plan well in terms of bilingual action in English and Indonesia. In addition, they have to consider many aspects of students’ condition and their

need in the subject. Then, based on the findings of this research, it is recommended to the bilingual teacher to prepare their selves with some important skill in teaching such as making a good lesson plans and implementing some various strategies and techniques in teaching at bilingual program at elementary school.

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