**Mapping Out the Framework of Immersion Program at the Laboratory**

**Primary School of Universitas Negeri Malang**

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ABSTRACT

*This research aims at conducting a thorough investigation on the immersion program at the Laboratory Primary School of Universitas Negeri Malang. It objectifies (1) mapping the English competence of the 3rd Graders of ICP students, (2) mapping the Mathematics and Science competences of the 3rd Graders ICP students, and (3) mapping the framework of the immersion program implemented to ICP classes. The subjects of this research are both the students and the teachers of the ICP class Grade IIIA. The data are collected through document study, test of language competence, questionnaire, observation, and interview. The findings indicate that the students possess good English language competence, comprehensively and productively. In language comprehension, 80% of the students are able to comprehend meanings of explicit and implicit imperatives in the forms of declatives and interrogatives. In language production, 80% of the students are able produce simple basic sytactic sentences (SVO order) accurately using almost correct singular-plural grammar and present-past tenses. The framework of this immersion program are (1) the implementation of the bridging course, (2) a synergy between national and international curriculum, (3 ) content-based learning since Grade I, (4) English classes are conducted 3 meetings*

*per week with the proportion of twice a week of regular classes (Listening, Reading, Writing, and Speaking) and one additional meeting for Reading only, (5) enrollment in Progression and Check Point from CIE (Cambridge International Examination), (6) each ICP class is handled by one class teacher and one course tearcher who is internationally sertified.*

*Keywords: immersion program; ICP class; content-based learning*

RATIONALE

Previous studies on second language acquisition have resulted some different hypotheses yet fundamental, that children who are born from bilingual parents tend to have language problems, under the assumption that the children’s brains are not able develop the two different languages at one time, therefore leading them to confusion, incomplete first language competence, and delayed second language acquisition (Crystal, 2003). This pessimism inspires some other researches, one of which is the investigation toward monolingual and bilingual children in Canada in a French Immersion Program (Steinberg, et al, 2001). A longitudinal study conducted by Bruck, Lambert, and Tucker (1976) toward children with English as native language who were in a total immersion program of French, find that in the fourth or fifth year, the children’s French competence, including their reading and writing skills, can already resemble the competence of a French native speaker without losing their first language competence, that is English. This research also proves that bilingual children supersede monolingual children in a

creativity test. This research is then developed by some other similar researches by Peal and Lambert (1962), Bain and Yu (1980), Lapkin, Swain, & Shapson (1990), Tarone and Swain (1995), Yeoman (1996), and Baker and Jones (1998) underlining positif findings on second language acquisition.

This present research is a research on second language acquisition with a long-term objective which is to prove the hypothesis of some experts on its positive and negative impacts. A deep investigation is conducted the implementation process of the Immersion Program at the International Class Program (ICP) of the Laboratory Primary School of Universitas Negeri Malang in order to map its framework. Moreover, there is also an observation on the English competence of the students of ICP class Grade III who were in the immersion program since Grade I in order to get a complete description on the profile of the program. Specifically, this research has 3 (three) objectives; (1) mapping the English competence of the ICP students at Grade III, (2) mapping the Mathematics and Science competences of the ICP students at Grade III, and (3) mapping the framework of the immersion program which has been implemented for the ICP students from Grade I to Grade III of the Laboratory Primary School of Universitas Negeri Malang.

THEORETICAL FRAMEWORK

IMMERSION METHOD WITHIN THE FRAMEWORK OF SECOND LANGUAGE AQCUISITION

Immersion in the framework of second language acquisition is the use of second language as the language of classroom instruction, so that the mastery of structures which involves the accuracy and grammar is acquired through a meaningful input acquisition process. This method is believed to be a trusted method of second language acquisition which will not harm the first language. Bianco (2009) makes an analysis toward implementation research of immersion in China, Germany, and France, and finds the fact that the children who were in the immersion program were able to develop their intellectual and intelligence functions without threatening their first language development. In his research, Bianco also underlines the findings of De Courcy (2002) on the success of primary school students in Melbourne Australia to acquire not only the knowledge of science taught in German, but also the development of flexibility of cognition and thinking skill, compared to children who are learning in English only. Similar

fundamental finding is also shown in a longitudinal study by Hermanto, et al (2012) who concern on linguistic and metalinguistic competence of second graders and fifth graders at a France Immersion Program. The linguistic competence of the students, particularly the mastery of vocabularies and grammar of the first language is seen to be higher at the fifth graders who join the classes using French as the language of the classroom instruction; nevertheless, their metalinguistic competence in the second language supersedes their metalinguistic competence in the first language. A comparative study by Marian, et al (2013) toward the scores of a reading

test and a math test of the students of some primary schools which implement a Two-Way Immersion (TWI) Program shows that this bilingual program has a positive impact on increasing the students’ reading skill both in their first and second language, as well as their mathematics knowledge.

These three research findings have fundamentally strengthen the hypothesis that second language exposure through immersion program does not threaten the linguistic and cognitive development of a bilingual child. On the other hand, they can strengthen his mentality and thinking process which optimizes his second language acquisition.

Another success story of second language immersion program is a French Total Immersion Program, one of which is implemented in Manitoba since 1973. It developed 3 programs: (1) early immersion, for pre-school students and first graders of primary school; (2) middle immersion, for fourth graders of primary school; and (3) late immersion, for seventh graders of primary school. To optimize the results, the students are suggested to continue the program until their twelfth grade.

A research from Lumbert and Tucker (1972) in Bournot-Trites and Tallowitz (2002: 1-2) concerning on the implementation of an Early French Immersion Program in Motreal, Canada. The goal is to equip the children whose first language is English with French competence without threatening the development of their first language. The findings show that in the first year, the children’s competence in the first language is decreasing; however, in the second and following years, this obstacle does not occur anymore. Genesee and Stanley (1976) find a different tendency since their comparative study between English writing products of the students who were in an immersion program and of the students who were in English Program does not show a significant different. Reeder, Buntain, and Takakuwa (1999) also conduct a

study on the effect of the increasing frequency of the usage of classroom instruction in French in an early immersion program in Vancouver, Canada, toward the English competence as the first language. The findings show that there is no significant difference in their writing skills in the first language. In other word, the effect of intense exposure in French does not threaten the English language. In the following year, Turnbull, Hart, and Lapkin (2000) conducted an evaluative study toward the implementation of French Immersion Program relating to its effect on the development of English competence as the first language. This study indicates a positive result because in the third year, the students showed a balanced ability of language performance,

particularly in reading and writing, between the first and second language. Moreover, in the sixth year, the students who were in the immersion program supersede the regular students. Even though showing some different tendencies, these researches generally indicate a positive signal since the implementation of immersion program does not show any bad impact toward the competence of the first language.

Nevertheless, Marsh, et al (2000) also finds a different tendency while doing a research on the use of English as classroom instruction in some non-English subjects, including mathematics, in Hong Kong. The findings show that English as the language of classroom instruction has a negative influence on the competence and skills of the non-English subjects. However, this research also has some weaknesses, they are: (1) the research subjects are the students of late immersion program of a high school, (2) the measurement is only done toward written products, not the spoken ones, (3) the teachers of the non-English subjects do not have adequate English competence. On the other hand, a third research is done by Bournot-Trites and Reeder (2001) focusing on the influence of second language, which is French, in a total immersion program toward mathematics competence. One set of mathematics test was given to two groups of

students with different background. Students of the French Total Immersion Program who receive math lesson in English show higher test results compared to the monolinguals.

RESEARCH METHOD

The design of this research is descriptive qualitative as according to Creswell (2012), a descriptive design is a picturesque of a reality. In other word, this research presents a true description of the situation while the research is being conducted, which is to map the characteristics of the Immersion Program which has been implemented in the Laboratory Primary School of Universitas Negeri Malang by observing the English competence and Mathematics and Science competences in English of the ICP (International Class Program) students Grade III, including the students’ English language acquisition after being exposed to the program since Grade I.

In addition, the appropriate approarch for this research is a qualitative approach as according to Fraenkell and Wallen (1993:380), as long as the collected data are in the form of words, not numbers, those data are qualified through description resulting a descriptive finding. Even though some of the raw data are in form of scores (numbers), these numbers are still analyzed

and described qualitatively. The raw data which are in form of numbers are derived from: (1) the validation of English, Math, and Science tests results using Item Analysis (ITEMAN), and (2)

the results of class observation and interview with the teachers using the scale of 1 to 4.

The subjects of this research are the 25 students of ICP (*International Class Program*) Grade III, one Math teacher, one Science teacher, one English teacher, one class teacher, and one program manager who supplied the documents of the immersion program.

Based on the 3 objectives of this research, the needed instruments to gain the first and second objectives are in the form of competency tests, one of which was English competency test which is developed by the researchers based on the two different curricula implemented in ICP classes

of the Laboratory Primary School of Universitas Negeri Malang, so that the results of the test can be used to map the language competence of the students as the results of the exposure to the second language from Grade I to Grade III in the framework of the immersion program. The competency tests which were developed were not only for English subject but also for Mathematics and Science subjects. The development of the test was done through: (1) the study of English, Math, and Science syllabus based on the synergy of national curriculum (2006) and international curriculum, (2) the mapping of competence and sub-competence of the three subjects, (3) the development of the frames of the 30 questions by combining objective format and essay format for each subject, (4) the try-out of the tests which have been validated by the teachers, and (5) the impelentation of the competency tests.

In order to answer the third research question, the needed instruments are observation sheets, questionnaires, and interview guide, which were given to get a thorough description of the framework of the immersion program.

FINDINGS

In order to answer the first and second problem, which is competences in English, Science, and Mathematics, the researcher had developed a set of test in English for the three aforementioned subjects: English, Science, and Mathematics. Those tests were developed to be externally validated and then tried out to the research subjects. Whereas, in order to provide answer for the third question, which is the characteristics of Immersion Program that is already implemented for ICP students at the Laboratory Primary School of UniversitasNegeri Malang, on which the students are found to have developed proficiency in certain language and non-language aspects. The result of the observation in the teaching and learning process and the interview with the teachers will be explained as follows.

LANGUAGE PROFICIENCY TEST RESULT

By virtue of the result analysis in English proficiency tests from 3 subjects which are English, Science, and Mathematics, language acquisition can be portrayed in two aspects; language comprehension and language production as follows.

THE LANGUAGE ACQUISITION BASED ON ENGLISH PROFICIENCY TEST

Language comprehension in bilingual teaching and learning process as the subject of this research is observed from the students’ capability to understand imperative sentence in the given question. The imperative sentence arranged in different forms and vocabularies so it can be used to draw grammatical lexical capability. Based on the explanation on Table 4.1, it can be concluded that the average rate of capability to understand the imperative sentence which is expressed explicitly among research subjects is 94 %, while the average rate of capability to understand imperative sentence which is expressed implicitly among research subjects is 77.5%. This result indicates that there are stages in acquiring second language which makes explicit imperative sentences easier to comprehend so that these sentences are also easily responded by the research subjects. However, with a percentage of 77.5% as the average number of comprehension, it is considered significant enough to map the competence in comprehending second language which is possessed by the research subjects. The mapping becomes one of the indicators in quantity and quality exposure given to them. When a child is exposed to various forms of imperative sentences, he or she will be accustomed to comprehend that multiple pattern thus the child will also be able to make generalization and contextualization with other similar sentences.

Observation result towards students’ productive capability as the subject of this research shows various preferences. Assessment of competency is directed to produce 3 productive capabilities, which is capability to make positive, negative, and interrogative sentence. Observation about capabilities in producing word, phrase, simple and complex sentence are also inserted in the framework of those three types of sentence.

Grammatical features which becomes the focus of positive sentence production are (1) singular – plural, (2) tense marker, and (3) basic syntax structure (S-V-O order). Referring to curriculum document, those two features have been learnt by the research subjects. Concerned with the first grammatical feature, which is capability to produce and give marks on singular – plural, from 21

students, 11 students were able to produce accurate sentence, 7 students were less accurate, and 3 students were not giving answer to this question

*14. Change these sentences from singular to plural. Point “a” has been done for you.*

|  |  |  |
| --- | --- | --- |
|  | ***Singular*** | ***Plural*** |
| *A* | *She buys* ***one*** *good* ***book****.* | *[three] She buys* ***three*** *good* ***books****.* |
| *B* | *I have one pencil case.* | *[two]* |
| *C* | *Inside the pencil case, there is one*  *pocket.* | *[many]* |

Some of the seven students who gave less accurate answer wrote; *I have two pencil case* and *I have two pencils case*. Whereas on the next question for question number 14, the test result shows that 13 students made mistake when transforming singular sentence into plural, 5 students wrote construction of correct plural sentence, and 3 students were not giving answer. Inaccurate plural sentence appeared in some of these answers; *there is many pockets, one pockets, there is many pocket, there’s one pockets,* and *there are many pocket.*

The second grammatical feature is tense marker which is articulated in this question,

*15. Change this sentence from present to past tense. Point “a” has been done for you.*

|  |  |  |
| --- | --- | --- |
|  | ***Present*** | ***Past*** |
| *A* | *She* ***buys*** *a good book* ***every week****.* | *She* ***bought*** *a good book* ***last week****.* |
| *B* | *I* ***help*** *my mother preparing dinner*  ***everyday****.* | *[****yesterday****]* |

From the 21 research subjects in this study, 3 students wrote the transformation of present sentence into past accurately, 13 students gave inaccurate past marker, and 5 students were not giving any answer. The inaccuracy of positive sentence construction with past marker is presented in the following example,

*Yesterday I buy book*

*I help my mother preoaring dinner last day.*

*Yesterday I help mu mother preparing dinner everyday. Yesterday, I helps my mother preparing dinner. Yesterday I helps my mother preparing dinner everyday I helping my mother preparing dinner yesterday.*

*I helping my mother preparing dinner every time.*

In question number 10, the research subjects were asked to describe a picture with one complete sentence. From the 21 subjects observed, 11 students were able to produce complete sentence with correct word order and grammatical marker, 6 students were able to produce complete sentence with correct word order but they used inaccurate grammatical marker, 3 students among the subjects were only able to produce word/phrase, not a sentence, and 1 subject did not make any production. Question number 11 is as follows,

*11. Mention three activities that you usually do at home after school. Write them in complete sentences. a.*

*b.*

*c.*

Question number 11 is aimed to dig the students’ syntactic knowledge, mainly in producing simple complete sentence with correct pattern of English syntax and also equipped with accurate grammatical marker. The observation result towards this competency test shows that from the

63 sentences that the students must produce, 28 of the were simple complete sentence with accurate word order and grammatical marker, 13 others were complete sentence with correct word order but inaccurate grammatical marker, the other 16 were not counted as sentence but rather word and phrase, and the last 6 sentences had no form or the students did not answer the question.

The three paragraphs above describe the result of language production which is obtained by using open ended question, while the paragraph below will explain the result of language production which is explored from question number 7 (a, b, c) and 8 (a and b) with closed question. Question number 7 can be answered by understanding the content of the text. After that, the research subjects can concentrate on some important points which lead them to answer the question as follows:

*7. What can you do to keep the White’s Tree Frog from sickness?*

*a.*

*b.*

*c.*

*d.*

The instruction in question number 7 above is not equipped with a direction to be answered in word, phrase, clause, or even complete sentence, and this has a purpose to dig the ability of research subjects in producing language automatically. From the 83 answers that should be produced by 21 research subject, the researchers found some interesting findings: (1) 7 sentences were produced in the form of affirmative/positive sentence with complete syntax structure, correct SVO order, and accurate tense marker, such as these following samples;

*You will have to keep your frog warm. You will have to give your frog vitamins. You have to look them outside.*

(2) 3 sentences produced in the form of affirmative/positive sentence with complete syntax structure, correct SVO order, and adjusted with the context of the given question, which is pronominal adjustment, but along with minor grammatical error, such as these following samples;

***I*** *can help the frog*

***I*** *can keeping the frog*

***I*** *can give food*

***I*** *can give drink*

(3) The rest 73 questions produced in the form of imperative sentence, such as these following samples;

*give the frog food*

*give frog vitamins take away from sun*

Syntactic competence of research subjects were specially observed from word arrangement question in question number 8, which is

*8. Arrange the words below into a good sentence. a. we–to – week – last – went – Yogyakarta*

*b. puts – juice– mangoes – Sue– her – two – fruit – in*

On question number 8.a, 20 research subjects produce correct word order which is understandable in terms of meaning and form. The sentence reads *we went to Yogyakarta last week.* A different finding is seen in question 8.b, there is only 1 subject who can produce word order based on correct syntactical order. The sentence reads *Sue puts two mangoes in her fruit juice*. The other 20 subjects produce different sentence forms, such as

*Sue puts her two mangoes fruit in juice. Sue puts fruits in her two mangooes juice. Sue puts her fruit in two mangoes juice. Sue puts her two manggo in juice fruit*

To know more about the research subjects’ language acquisition, a question type which allows the students to tell their personal experience is also included in the test. This can be seen in question number 43

*43. You have observed the picture on number 12. Now, write your activities on your last holiday. Use these ideas to help you plan your story.*

 *Think about when you spent your last holiday.*

 *Think about where you spent your last holiday.*

 *Think about with whom you spent your last holiday.*

 *Think about what you did on your last holiday.*

 *Think about how you felt about your last holiday.*

From the 21 research subjects, 3 of them were not able to produce a short story but the other 18 students were able to produce it. In the following, a short explanation will show the stages to acquire language acquisition, mainly in the aspect (1) the number of words in the story, (2) the chosen topic, (3) word order (basic syntactic structure), and (4) grammatical marker. Seeing from the number of words in the story, generally, the research subjects produced 7 sentences in the short story they wrote. Meanwhile, seeing the topic chosen by the research subjects, such as *My Holiday* and *Last Holiday,* most of the students chose a very specific topic, such as *Went to the Trans Studio Makassar, I Went to Surabaya, Steak Holiday*, and *Go to Beach*. This last topic *(Go to Beach)* was chosen by many of the research subjects. Based on the analysis on students’

ability to produce a sentence with correct syntactical order, most importantly related to SVO

order, from the 13 sentences produced by the research subjects in their short story, all of them

were arranged using the correct word order although some grammatical mistakes are still found . This can be seen in the following sample

(1) *Last week. I go to the beach with my family.*

(2) *Yesterday I go to beach. I go with family. I like go to beach.*

(3) *I with my family walking at 10.30 p.m.*

(4) *We shopping in many shop.*

(5) *In there, I swimming with my father.*

(6) *My father in Malang, because my father have a work.*

(7) *In the beach so many people.*

(8) *But it is time to went home.* (9) *Go to beach is very fun.* (10) *I like go to the beach.*

(11) *…before go home I take a bath and change cloth.*

Analyzing the samples above, it can be concluded that data (1) – (2) do not use correct past tense marker, data (3) – (7) do not have any verb, data (8) should have used simple verb, and data (9) – (11) are not transformed into nominal verb (going).

THE LANGUAGE ACQUISITION BASED ON SCIENCE PROFICIENCY TEST

The findings which explain the students’ language acquisition based on their Science proficiency test is taken from real study in class IIIA ICP. The twenty one research subjects whose score range from 95 to 50 are then classified into 3 (three) groups based on their range score: the upper group (95 to 81), the middle group (80 to 66), and the lower group (65 to 50). The language comprehension and language production of the research subjects will also be presented in the following explanation.

In terms of language comprehension, it is concluded that 1) the upper group (11/52% of the students) understand the meaning of specific words and phrases related to Science. They also understand several sentence types, such as declarative, petunjuk, and interrogative sentence, 2) the middle group (7/33& of the students) understand the meaning of some specific words and phrases related to Science. They also understand several sentence types, such as declarative, petunjuk, and interrogative sentence, and 3) the lower group (3/14% of the students) understand the meaning of some specific words and phrases related to Science. They also understand several sentence types, such as declarative, petunjuk, and interrogative sentence (see Appendix 7)

On the other hand, in terms of language production, 1) the upper group is defined to be able to write several words such as root, stem, James, leaves, jump, hand, eat, , float, carbohydrate, strecthy, shiny, jogging, food, fertilizer, chocolate, rough; phrases like fatty foods; clauses like because the plant gave water; and complete simple sentence like it will go up again, the ping pong ball will float all correctly, 2) the middle group is defined to be able to write root or

‘steam’ to label specific part of a tree, strecthy, shiny, chocolate; some expressions such as swimming and running; clauses like for our healthy (health); and complete simple sentence as in No, it can’t, Yes, it can, He give water every day, He give water every day, and 3) the lower group is defined to be able to write several words such as Root, water, yes, no , Writing,

eat , walking**;** several expressions such as eraser, walk and run; clauses like Because he water water every day; and complete simple sentence as in the ball will go under the water and go up again.

THE LANGUAGE ACQUISITION BASED ON MATHEMATICS PROFICIENCY TEST

The findings which explain the students’ language acquisition based on their Mathematics proficiency test is taken from real study in class IIIA ICP. From 16 students in class IIIA who took the Real Test, the score range from 16.35 to 75.77. These students are then classified into 3 (three) groups based on their range score: (1) the upper group or the high achiever (from 60.38 to

75.77), (2) the middle group or the middle achiever (from 51.73 to 58.08), and (3) the lower group or the low achiever (from 16.35 to 46.54).

In terms of language acquisition, it can be said that (1) the upper group or the high achiever (5 students) is able to understand the meaning of many words and phrases relevant to mathematics, as well as some interrogative and imperative sentences, (2) ) the middle group or the middle achiever (6 students) is able to understand the meaning of half of the given words and phrases related to Mathematics, as well as some interrogative and imperative sentences, (3) the lower group or the low achiever (5 students) is able to understand the meaning of a few of words and phrases relevant to mathematics, as well as some interrogative and imperative sentences**.**

In terms of language production, (1) the upper group or the high achiever is able to write phrases like *one hundred and fourteen, five hundred and fifty three, fifteen, fifty six, one hundred and forty three, seven hundred and seventy two, sixteen, two hundred and fifty seven, four hundred and fifty five, one hundred and eighty four, twenty thousand rupiahs, four thousand rupiahs,* and *one hundred eighty six thousand rupiah all correctly,* (2) the middle group or the middle

achiever is able to write phrases like *one hundred and fourteen, five hundred and fifty three, fifty five, fifty six, three hundred and forty four, seven hundred and seventy two, eleven, two hundred and seventy five, four hundred and five, one hundred eighty four, ten thousand, two thousand,* and *one hundred thousand* all correctly, and (3) the lower group or the low achiever just able to write phrases like *five hundreds and fifty three, fifty five, fifty six, three hundreds and forty four, seven hundreds and seventy two, two hundreds and seventy five,* and *two hundreds fifty five* correctly. However, they still make some mistakes in their writing , i.e*, one hundrade and*

*fourteen, six hundrade and fivety three, fivety six, three hundrade and thirty tree, seven hundrade and seventy two, two hundrade and fivety seven, four hundrade fivety five, one hundrade and eighty four,* and *four hundrate* .

Based on the analysis of these test scores, it can be concluded that the students belong to the upper group or the high achiever is able to give correct answer since they can understand the instruction given in English.

THE FRAMEWORK OF *IMMERSION PROGRAM* FOR ICP CLASS

Based on the analysis of the research observation and the interview with the teacher, we can draw the characteristics of Immersion Program for English, Science, and Mathematics lesson in the following extractions.

(1) The students are enrolled in matriculation program (bridging course) before attending ICP

class.

(2) The students of SD Lab Universitas Negeri Malang are exposed to English, Science and Mathematics lesson since they are on the first grade using the collaboration of both national and international curriculum. Within a week, they have 3 meetings for English and 2 meetings for both Science and Mathematics. The time allotment for each meeting is 70 minutes.

(3) The 3 meetings programmed for English are then divided into tow different learning focus.

The 2 meetings are for regular class aimed at enhancing the students’ Listening, Reading,

Writing, and Speaking skill and the one additional meeting is focused on Reading.

(4) The time allotment for Science and Mathematic lesson for students on the third grade is added to be 4 hours (140 minute).

(5) The introduction of Science and Mathematics concepts is given in Bahasa Indonesia, but the review is given in English. As the students get into the higher grade, the use of Bahasa Indonesia will be reduced. As well as the review, the feedback is mostly done in English.

(6) The syntactical structure and the language components of English are taught using contextual text in the English, Science, and Mathematics workbook developed by the teacher.

(7) Every year, ICP students are joining Progression and Achievement Test from CIE (Cambridge International Examination).

(8) The assessment in Mathematics and Science is given in English to prepare the students for formative and summative international-standardized test (Progression dan Achievement Test).

(9) The ICP class is managed by two teachers. The first is classroom teacher (mostly are English teachers) and subject teacher. On the other words, Science and Mathematics teacher are accompanied by English teacher as classroom teacher, so they can have

collaborative work to monitor the students’ language proficiency. Teachers in the ICP class

are certified with international certificate.

(10) During the learning process, teachers will have three learning stages: the opening activity is aimed to build the students’ background knowledge, the main activity is aimed to build the comprehension related to Science and the closing activity is aimed to assess how the students achieve competence. 4) The competence of science is acquired through a practice using *LOTS* (*Low Order Thinking Skills*) and *HOTS* (*High Order Thinking Skills*) with various learning strategies and media applied inside and outside the class; 9) continuous training done by university in cooperation with UPT Pusat Pengembangan Laboratorium Pendidikan Universitas Negeri Malang.

DISCUSSION

Based on the results of findings aforementioned, starting from the stage of the bilingual learners’ acquisition of English to the mapping of the immersion program reclected through the construction of sinergized curriculum in general and the exclusive instructional process for English, Math and Science lessons in specific, there have been several significant points noted

as follows.

Firstly, the lab school frameworks for English, Math, and Science are characterized by their exclusive contents compared to the other regular primary schools’ curriculum that is the schools have blended the national and international contents so as to accommodate international-based instructional materials for the three subject matters which are in one case the materials are considered more universal and global wide. This effort is expected not only to reinforce the learning of English or accelerate the learners’ English competence to enable them to communicate across country and culture, but also to make them as asset of the country young generation be exposed more to English both in the English class and non English classes—Math and Science. This basic principle was examined long ago by Mills (1993) exclaiming that language learning is not only just an active process optimally working in some communicative exchanges but also requires massive language exposure among language users. Therefore, learning English should happen both in an English class and non English classes like Math and Science as it has been realized by the blended curriculum designed by the university-based laboratory primary school. As evidence, the implementation of English- based Math and Science has optimalized the learners’ knowledge on Math and Science (non linguistic aspects) as well as their linguistic competence.

Again, Mills (1993) opined that diverse languages indeed function as a means of communication for learners to communicate at their home, school and community. Having exposed to multilingual context, the learners are expected to be equipped with various sentence patterns and their usage. Thus, this kind of English instruction may bring great benefit for the learners in non English classes. In response to this, the concept of English across curriculum has then featured

the immersion program at *Universitas Negeri Malang* laboratory primary schools.

In practice, in order to enable the students to utilize the language more effectively in daily life, English is immersed in the teaching of Science and Mathematics in addition to the English lesson in particular classes the so-called International Class Program (abbreviated ICP) starting from Grade I until Grade III. Much language input in communication between teachers and students and among students is expected to improve their English proficiency. Such a practice has been tried out by some experts like Carrasquillo, Kucer, and Abrams (2004) discovering that firstly, there was a tendency that content-based language learning may help the learners optimalize language learning for this raises their motivation and they are more exposed to Social Studies, Science and Math. In other words, integrating content and language affects acquisition of diverse cognitive, linguistic, and metacognitive process. Those who are immersed in such learning will acquire both content-based comprehension and language skills (listening, reading, speaking and writing at one time. Secondly, it has been stated that the synergy of the context of school instruction, content-based learning and language skills can be considered as the indicator of learners’ competence in comprehending and producing language. However, some experts still question the impact of content-based instruction on children’s cognitive and linguistic development. Yet, Swain and Lapkin (1982) in their research discovered that transfering knowledge on any subject matters in second language will not harm the development of their intellect and intelligence.

Based on the results of this research, it empirically revealed that firstly, that the middle and low achievers still found difficulties in solving mathematical problems, yet they were able to comprehend instrcutions using high frequency words and phrases. Whenever they came across

instructions with low frequeny words or phrases, they had problems in understanding the meaning of instructions resulting in being unable to provide correct answers. This evidence is supported by a study by Marsh et al. (2000) verifying that in Hong Kong there was a tendency that the use of English as the medium of instruction in teaching Math did not provide a positive impact on the students’ mastery of Mathematical materials as non language subject matters. In other words, for the low and middle achievers with insufficient English proficiency, the teaching of Math through English as a means of instruction (content-based instruction) did not make the learners be more competent in comprehending the mathematical concepts to solve problems.

Secondly, for the achievers of the Science instruction, it was discovered that (1) in general the learners in different levels of proficiency (low, mid and high) were competent enough in understanding words, phrases, instructions, declarative statements, and questions as reflected in their responses. However, compared to the high achievers, the low and mid had more problems in grasping the content since their linguistic competence was limited. For instance, in answering the question “ Why is it important to have various food?” They tended to answer “Fish and

cheese” (The right answer is “To take care of good health). Hence, it can be inferred then that the

high achievers are more competent in internalizing linguistic items than those of the low and mid. This evidence is reinforced by a study by Wagner-Gough and Hatch (1975) stipulating that the acquisition of second language is influenced by several factors in which one of them is a lot of exposure or input. Children, according to them, are inclined to repeat, write, speak linguistic input they are learning whenever they face difficuties in understanding content; 2) in the course of learning content through English, particularly in the level of production, the learners with different levels of intelligence may experience what is commonly called “interlanguage” (Krashen, 1981) in which language learners have their own lingustic patterns to express ideas, not following the required system. As an example, instead of expressing “ ... because James

waters the plant every day,” they wrote down “because James water the plant every day.” (The -s ending in the verb water is missing); 3) the learners learned English via content which is according to Dale and Tanner (2012) such learning is based on CLIL approach; 4) prior to language production, the learners should obtain much input (language comprehension) which is

in line with what Krashen (1981) stated that language production requires a lot of language input.

Further, Carrasquillo, Kucer, and Abrams (2004) clarify that in order to support the success of sinergizing the mastery of content and language competence in instruction, a teacher is requested to introduce various topics through diverse strategies like demonstration, doing experiments, conducting presentions etc. and the employment of instructional media (real objects, pictures, film, etc.). As an illustration, a teacher can make use of a thermometer, telescope, computer, and scale in a Science class, and s/he can use a map, globe, video, and calculator in a Math class. Thus, in integrating content and language, there are at least 4 (four) strategies implemented in class, namely “ (1) scaffolding instruction through appropriate comprehension monitoring, selfquestioning, and small-group discussion strategies; (2) direct instruction, especially for vocabulary development and for informationprocessing strategies; (3) frequent use of thematic units, and (4) frequent use of different types of questioning strategies to guide students to search for information “(Carrasquillo et al., 2004).

In addition to the above explanation, based on the results of class observations at Classes IIIA

and IIIB and interview with the teachers (English, Math, and Science) it is also evident that (1)

they have already apply the three strategies- two, three, and four recommended by Carrasquillo et al. (2004); (2) high frequency vocabulary and other technical terms are always pretaught in relation to theme-based topics being discussed; (3) questions as stimulus dealing with LOTS (lower order thinking skills) and HOTS (higher order thinking skills) are put into practice. In one hand, such instructional process is indeed considered sufficiently good for beginners in terms of the mastery of various diction, simple sentence patterns, and the accuracy of syntactic features. On the other hand, there still appeared some troublesome points like the misuse of tense markers ( to be specific, the past marker), the concepts of singular and plural forms, the use of of subject- specific vocabulary, and some conceptual ideas od Science.

According to the teachers in ICP, the use of English as a means of instruction for Science and Math is really a challenge for them. They stated that (1) the mastery of English is the prequisite in the process of teaching Science and Math. Basic Science deals with ‘Earth Science, Life Science, Physical Science, Natural Science, Chemistry, and Physics. This lesson is commonly taught through observations and simple experiments. Therefore, they are challenged to simplify the language for instructional materials on Science so as to assist the students at learning as

postulated by Carrasquillo et al. ( 2004). Simplyfing the language will make materials on Science more meaningful, thus the studetns achieve both content and language proficiency. Also, they are trained to think critically and scientifically through the process of observing, inferring,

predicting, hypothesizing and experimenting to discover something; (2) subject specific vocabulary is always introduced prior to learning Science; and (3) in order to reinforce high order thinking skills, the teachers provide them with problem solving activities to confirm scientific insights as well as improve language proficiency.

This is also true for the English-based Math instruction. Basic materials for Math which include measurement, currency, shapes, addition, substration and others are considered meaningful in students’ future life. Yet, there is also a challenge for the Math teachers. Before the English- based Math is delivered, they should (1) first introduce some Math specific vocabulary for the operation of particular contexts prior to comprehending mathematical concepts. Carrasquillo et al. (2004) highlighted that Math is not only concerned with the skills of counting but also more importantly the competence of critical thinking in solving problems; (2) scaffold English-based mathematical concepts. Often they have to use Indonesian to teach concepts or in emergency they conduct code switch or code mix.

All in all, the immersion program at the Laboratory Primary School, *Univeristas Negeri Malang*

is characterized by 4 (four) attributes, namely the implementation of blended curriculum

(national and international contents), English across Curriculum , learning strategies, and teacher made instructional materials in the form of worksheets. The production of worksheets are

usually supervised by a team of experts from the university and the samples can be seen in Attachments 14, 15, and 16). The worksheet always contains vocabulary as well as grammatical patterns in context as language input to enable the students to communicate both in class and outside class. For the English lesson in particular, there is one hour extra for reading session. Another thing deals with the way of learning process as Mills (1993) postulated that peer group support in which learners are encouraged to study together with their peers resulting in social interaction with various adaptive learning patterns so that they have opportunities to discuss, argue, question, give and refuse opinions. As a matter of fact, the lab school teachers particularly

the teachers of English, Science and Math have made efforts to employ communicative and interactive ways of learning so as to brush up the students’ mastery of English, one of which is problem solving activity in groups involving simple oral and written practices. This idea is strengthened by Mills (1993) exclaiming that communicative and task-based syllabi are effective to the development of learners’ language. In addition, materials like stories, song lyrics, nursery rhymes can be manipulated in such a way to be content-oriented and function as a means of improving their English (English across curriculum).

All the aforementioned efforts have been conducted so as to optimalize the learning of English as a foreign language in Indonesia in the hope that the students are equipped with language proficiency for global communication in the future life despite the learning of English takes longer time, starting from the very basic linguistic elements such sounds, words, word formation, and moving to higher components like kinds of sentences and sentence structutres. This is empirically strengthened by Mill’s statement (1993) that is at the beginning stage of learning a second language a child may not show significant linguistic development, however subsconciously her/his receptive and productive skills gradually improve. Indeed, the success of language learning and acquisition relies much on the quality of input/exposure, social environments, and child psychology, as stated by Kaur (1993) that “At the heart of the educational process lies the child” implying that it is crucial to consider children’s needs and condition as the center of language learning.

Further based on Kaur’s observation (1993) it was found out that in the process of second language learning for those who belong to risk takers will show positive language development especially in carrying out communication with limited vocabulary and grammar. This kind of attitude is assumed to be reinforced in second language learning. As empirical evidence, the subjects of this study had low affective filter in the course of learning English, Math and Science (as postulated by Brown, 2015). They were confident enough to express their ideas orally and even write short essays with some linguistic mistakes. Seemingly in writing simple short essays they expressed their ideas freely without bothering the organization of ideas. As an example, when writing about their experiences during the holidays, they just composed the story in a natural way with a few grammatical mistakes showing that the language development for children goes naturally.

CONCLUSIONS

Based on the results of analysis of tests on Math, Science and English, it can be inferred that (1) the research subjects have accomplished fairly good English proficiency, particularly in the domains of language comprehension and language production; (2) in case of understanding they are able to grasp instructions in forms of both explicit and implicit imperatives; (3) in terms of production they are able to produce simple sentence patterns like SVO order, the use of singularity and plurality, and the use of the simple present tense correctly eventhough there are still some grammatical mistakes; (4) the use of contextual and various vocabulary.

From the program perspective, it reveals that (1) the school has made efforts to execute a kind of bridging course for the English lesson prior to the implementation of the immersion program for the students being interested in ICP classes; (2) the school has synergized two curricula – nationally-based and internationally-based; (3) the English-based instructions for Math and

Science besides English have been introduced since the students were at Grade 1 ICP -- three times a week for the English lesson, and twice for Math and Science, 70 minutes per session for the three subjects; (4) the English lesson in particular is offered three times a week, twice for listening, reading, writing, and speaking and one additional session for reading; (5) there is some extra time for Math and Science for Grade 3, four times a week (about 140 minutes); (6) the concepts of Math and Science are first taught in Indonesian and then reviewed in English. The higher the class is the less use of indonesian for both subjects; (7) syntactic structure and linguistic components are exposed contextually in English-based workbooks for English, Math and Science developed by the teachers themselves; (8) every year the ICP students are required

to join the internationally based progression dan achievement tests; and (9) the ICP classes are always supervised by two teachers, one home class teacher (usually an English teacher) and one a subject-matter teacher with international standard certificate.

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ENDNOTES (TNR10)

Use TNR 10 here. Do not use footnotes but collect all as endnotes and place after main document after Acknowledgement but before References

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