

CHAPTER II
REVIEW OF THE RELATED LITERATURE
Physics Teacher's Problems in Teaching the Subject Using
English as a Medium of Instruction in Bilingual Classes
of Immersion Program

A. Previous Research

There are two theses that as guideline for the writer to arrange the theses because have similarity in program. That is Immersion program.

1. Talking about immersion class, there were some studies which have been conducted before. Disty Widiastuti (2009) conducted a research of eight year teachers of immersion class of SMPN 5 Semarang in the academic year of 2009/2010 in the field of the problems or difficulties faced by the subjects' teachers in teaching their subjects in immersion class.¹² The results of her investigation showed that the teacher's still have problems with the use of English in teaching and learning process, especially in making syllabus, in making lesson plan, in explaining their lesson in the class because they are not fluent in English both in orally and writing form, in communicating with their students in the daily

¹² Disty Widiastuty (2201405536), Unpublished theses under the title *Teachers' Difficulties in Teaching Their Subjects in An Immersion Class (A Case of the Year Eight Teachers in SMPN 5 Semarang in the academic year of 2009/2010)* .(Semarang: Language and Art Faculty, Semarang State University, 2010).

life, in teaching using visual and audio visual aid. The results were caused by some of the teachers have not taken the immersion program trainings. Some teachers have not joined the immersion program trainings at all. The similarity with my research that is she used qualitative research and descriptive research. The differences between her research and my research is object of the research. Her research is whole teacher in eight grade, but on my research only concern on physic teacher on eleventh grade.

2. The next researcher working into this topic is Zain (2009) conducted a research of year eleventh students of MAN 1 Semarang in the field of an analysis of student's speaking skill as a result of joining English immersion class.¹³ He found out that there is a significance of influence of joining English immersion class to English speaking skill. It was based on the result of t-value which was 4133 which was higher than value for significance level 1% and 5%. The similarity with my research that is he used immersion class as a subject of the study. The differences between her research and my research is method of research. He used quantitative research and experimental research, but on my research use qualitative research and descriptive research.

¹³ Zain, D.S.M, (22010405030) Unpublished theses under the title *An Analysis of Student's Speaking Skill as a Result of Joining English Immersion Class (A Study of the Year XI Students of MAN 1 Semarang in the Academic Year 2008/2009)* .(Semarang: Language and Art Faculty, Semarang State University, 2009).

So the writer took two theses above as a guideline in arranging theses under the title “Physic Teacher’s Problem in Teaching the Subject Using English as a Medium of Instruction in Bilingual Classes of Immersion Program” (A Case of Physic Teacher of MAN. 1 Semarang in the Academic Year of 2013/2014).

B. Theoretical Framework

This second section consists of ten subchapters. This section gives brief explanation and description about definition of teacher, roles of teacher, English language teaching across curriculum, English as medium of instruction, bilingualism and multilingualism, definition of immersion class program, the goal of immersion class, advantages of applying immersion class program, teacher in immersion classes, and teaching physics in immersion classes.

1. Teacher

a. Definition of Teacher

Teachers commonly have become important in teaching-learning process. Although nowadays teaching and learning process doesn’t only depend on the teachers, but they still took part and play a big role in teaching and learning process in class. People usually define teachers as the one who impart knowledge. Besides, teachers also called facilitator or mediator of learning and become the central concern of teaching-learning process.

“Teachers are active decision makers who use opportunities to apply theory that they master, especially in terms of subject they teach to the students, through observing classroom interaction, designing and teaching their own lessons, and making appropriate decisions in a wide variety of situations that confront them daily. They use many information sources: competence in the second language and culture; knowledge of how the curriculum is designed and implemented; application of subject knowledge to actual teaching; application of research findings to classroom teaching; clinical experience; and knowledge of the means by which teaching effectiveness is examined within the school context (Shrum, 2000: xiii)”.¹⁴

Similarly as defined in Oxford Learners’ Dictionary that “a teacher is a person who shows his students how to do something, so that they will be able to do it themselves”.¹⁵ Gay also states that “Teachers are cultural organizers, cultural mediators, and orchestras of social contexts for learning”.¹⁶ Furthermore, Wragg argues that “teachers are the paid professionals, and expected in law to act as a thoughtful

¹⁴ Shrum, J.L. and E.W. Glisan, *Teacher’s Handbook: Contextualized Language Instruction (2nd Ed)*, (United State of America: Heinle & Heinle, 2000), p.xiii.

¹⁵ *Oxford Learner’s Dictionary* (New York: Oxford University Press, 1995), p.1225.

¹⁶ Gay, G. *Cultural Responsive Teaching: Theory, Research & Practice*, (New York: Regent Publishing Company, 2000), p.30.

parents.¹⁷ As a conclusion, teacher means a person who, in school, undertakes duties that include the delivery of an educational program or the assessment of the student participation in educational program.

According to Watkins “teachers are introspective, cooperative, directive, expressive, leadership, and supervisor. Teachers look for the very best and expect the best out of those around them. Watkins also agreed that teachers have a highly developed intuition. They are highly skilled at understanding what is going on inside themselves and others. Teachers consider people to be their highest priority, and their communication often asserts a personal concern and willingness to help others. In addition, teachers are warm, outgoing, and value harmonious relations and interpersonal communication. Teachers are usually easy to get along with, tolerant of others, and popular. They may also be the most expressive of all the role variants. They have exceptional language skills enhance their influence within groups, and they are often asked to assume leadership roles”.¹⁸

¹⁷ Wragg, E.C, *An Introduction to Classroom Observation*, (London: Routledge, 1995), p.58

¹⁸ Watkins, C, *The Teacher's Role in Learning Process*, (Online, Available at www.rosindust.com), Accessed, 4 November 2012

In line with this, “teachers have a certain job; they design and organize learning activities, and get out of the way so that the students can go about their business of communicating and teaching (Kern)”.¹⁹ Teachers do not only help students to learn, assess their work, and guide them but also introduce them a culture. They highly capable of helping learners express their inner potential. They also should communicate to their students that each one of them has the potential to succeed and motivate others to meet the teachers’ positive expectations.

Other aspect teacher should master is that teachers must have good ability to communicate effectively and also good attitudes. They should be able to recognize their students with learning difficulties. Their background, personality, interest, knowledge, intentions, and preference will give big influence to their performance in delivering the material to the students. In addition, they should make teaching-learning process became interesting so that students can enjoy the learning process. They do not only give material for the students but also give motivation to study. Therefore, teachers should be able to fully understand the appropriate ways to share their knowledge with their students.

¹⁹ Kern, Richard, *Literacy and Language Teaching*, (Oxford: Oxford University Press, 2000), p.310.

b. Roles of Teacher

There are many opinions about the roles of teacher.

According to Wragg (1995) “roles of teacher are transmitter of knowledge, counselor, social worker, assessor, manager, even jailer. As a transmitter of knowledge, teacher plays role as the device to send the knowledge they master to the students. While as a counselor means that he/she, the teacher, advises the students about careers, aspirations or problem. As an assessor, the teacher marks student’s work, giving tests, and writing reports. Another teacher’s role is as a manager which means that he/she manages to look after resources, organizing groups, and setting goals. The last teacher’s role based on Wragg is as a jailer. As a jailer, teacher keeps in school reluctant attendants or checks up on possible truants”.²⁰

Still more, Cohen also defined “the teacher’s roles those are (1) the teacher as director of learning, (2) the teacher as a liaison between school and community, and (3) the teacher as a member of a profession. Next, based on Kenneth, he

²⁰ Wragg, E. C, *An Introduction to Classroom Observation*, (London: Routledge, 2007), p.28.

suggests that the teacher's roles can be divided into three broad categories: instructional expert, manager, and counselor."²¹

Teacher as an instructional expert means that he plans, guides, and evaluates learning. Moreover, as an instructional expert, he/she must organize the basic information which constitutes the foundation for learning and thinking. Besides, he/she must master the subject well including making decisions related to what to teach, what learning material to use is, the best method to teach the selected content, and how to evaluate the intended learning. As a manager, teacher has duties to order and structure the learning environment. Teacher's duties as manager including (1) makes rules and procedures for learning activities, (2) manage a classroom environment includes the classroom space, the way the physical space of the classroom, the seats, decoration, etc., (3) present a positive attitude toward the curriculum and toward the school, and learning in general and (4) required to manage and process great amounts of clerical work.

While as a counselor, the teacher in the classroom means that he or she must assist students who have problems in their learning and development. Teacher also has to have good

²¹ Cohen, Louis, *Educational Research in Classroom and Schools: A Manual of Materials and Methods*, (London: Harper & Row Publisher, 1976), p.265.

relations with students, parents, administrators, and colleagues for communication.

Then, according to Harmer (2001: 58),” teacher’s roles are controller, organizer, assessor, prompter, participant, resource, tutor, and observer. As a controller, the teacher controls the classroom situation to make the teaching and learning process conducive and comfortable. As an organizer, the teacher organizes the students to do some activities. The teacher gives information, directions and instructions to the students and get the students involve in the classroom activities. When the teacher acts as an assessor, he/she provides feedback and correction on the students’ performance and grade students in various ways. As a prompter, the teacher prompts and motivates the students to think creatively in doing the teaching and learning process. The teacher encourages, helps, and assists the students in doing their work. Then as the participant, the teacher might join in the classroom activities not as the teacher but also as a student by taking part in the discussion, role play and group activities. As a resource, sometimes the teacher helps the students when they find some difficult phrases or even when the students do not know how to say or how to write something. They may ask their teacher for information they would like to have in doing their activities. Furthermore, as a tutor, the teacher combines the role of prompter and resource. He/she explains the students what to do in the activities and guide them

to do the classroom activities. The last one is that the teacher as an observer which means they observe including watching, listening, and pay attention to what the students do so that he/she can take notes of what the students do during the class and then give them the useful group or individual feedback”.²²

Likewise, Cohen (1998) states that “the roles of teachers are: (1) teachers as diagnosticians means the teachers identify the students current learning strategies, heighten learners’ awareness as to how they learn best, and making the learners more aware of them; (2) teachers as learner trainers correlates with the teachers’ role in training the learners in the use of strategy best applied in the learners’ learning process; (3) teachers as coaches deals with teachers effort that work with individual learners to develop their language learning strategies, in this case, teachers are coaching them in areas in which they have already been trained or in areas where coaching alone could enhance either their awareness of possibly of useful strategies for the given task or their efficiency at utilizing these strategies; (4) teachers as coordinators focuses on coordinating the teaching; (5) teachers as language learners related to share their learning experiences with their students; and (6) teachers as researchers can be defined as the teachers role that the teachers can analyze the learning process along with the

²² Harmer, J, *The Practice of English Language Teaching* (3rd Ed), (Harlow: Longman, 2001), p.58.

learners, pointing up the changes, and also can research their own teaching process to determine where they are experiencing success or failure, and why”.²³

Talking about teacher’s roles, teacher should also accomplished teaching by basing their learning, teaching, and reflecting on the five propositions established by the National Board for Professional Teaching Standards (in Shrum), “those are: (1) teachers are committed to students and their learning, (2) teachers know the subjects they teach and how to teach those subjects to students, (3) teachers are responsible for managing and monitoring student learning, (4) teachers think systematically about their practice and learn from experience and (5) teachers are members of learning”.²⁴

On the top of that, teachers are the only ones who can help the students in school. Teachers are supposed to lead their students into good learning techniques in order the students can master the material well. In line with this, Wallace states that “good learning techniques and good teaching and assessment techniques are two side of the same coin”. Both sets of techniques should have equal priority for the success of teaching and learning process.

²³ Cohen, A.D, *Strategies in Learning and Using a Second Language*, (New York: Addison Wesley Longman Inc, 1998), p.98-102.

²⁴ Shrum, J. L and E.W. Glisan, *Teacher’s Handbook: Contextualized Language Instruction (2nd Ed)*, (United State of America: Heinle & Heinle, 2000), p.xiii.

In order to be successful teachers, the teachers should learn to be approachable for they are the only ones who can help the students in school. Teacher helps their students in some scopes, not only in academic growth, but also in emotional, mental, physical and spiritual growth of their students. Moreover, based on Nasution, “there are several traits that good teachers possess, those are: (1) A view of teaching as basically first and last a human process, (2) feeling good about themselves and they have positive view of others, (3) well information on a wide range of subjects, and (4) the ability to communicate effectively. The teacher must understand that the communication process includes more than presentation”.²⁵

Meanwhile, as stated by Hoyle, “a successful teacher can be seen from his/her skill to form accurate perceptions of the classroom situation and the changes which occur within this situation. He/she also should aware of the teacher roles that are appropriate to the different situations and processes the personality skills which allow him to adapt to changing situations”.²⁶

In line with the previous explanation, Tickoo argues that “all subject teachers need to be aware of the linguistic process by which their pupils acquire information and

²⁵ Nasution, S, *Pengembangan Kurikulum*, (Bandung: Citra Aditya Bhakti, 2003), p. 33.

²⁶ Hoyle, E, *The Role of Teacher*, (London: Routledge, 1969), p.45.

understanding, and the implications for the teacher's own use of language, and the reading demands of their own subjects, ways in which the pupils can be helped to meet them".²⁷

Finally, teachers at the classes of immersion program have to prepare and mastery the materials in target language well. They have to use English as the medium of instruction. It requires teachers who are not only experienced and master the subject lesson well but also have near native proficiency in oral and written forms of English for the medium of the instruction. It is rather difficult of course for they are not English teacher which have not proper English ability but are supposed to deliver some specific aspect of teaching of one particular subject, like physics, by using English.

2. English Language Teaching

a. English Language Teaching Across Curriculum

Language across the curriculum began as a warning against the neglect of language use in secondary school. In the secondary school language becomes the responsibility of the language specialist. Having analyzed this condition, every school, not only secondary school but also primary school, should develop a policy for language across the curriculum.

“English language teaching across curriculum becomes far more important to play in countries where

²⁷ Tickoo, L. Mahkan, *Language Across The Curriculum*, (Singapore: SEAMEO Regional Language Center, 1986), p.1.

English as global language is taught as a second or foreign language (Tickoo)".²⁸ That is why Immersion program in Indonesia was developed by the government as the impact of English language teaching across curriculum where it stresses on how people learn to use language to achieve understanding and appreciation of their experiences. As stated by Fillion that the writer quoted from http://www.moec.gov.jm/curricula/GuideGrade7-9_LangArts.pdf, "Language across the curriculum stresses concern for how people learn to use language, how they use language to achieve understanding and appreciation of their experiences (including the curriculum content introduced in school) and how language use influences cognitive development (Fillion)".²⁹

Language across the curriculum means verbalization as the fulfillment of understanding within each subject area. The aim of English language teaching across curriculum is to improve the students' ability to communicate through language as a necessary skill in all subjects area. Supporting this purpose, Faridi says about "the teachers who teach in Immersion class have to pass some steps:

²⁸ Tickoo, L. Mahkan, *Language Across The Curriculum*, (Singapore: Seameo Regional Language Center, 1986), p.6.

²⁹ http://www.moec.gov.jm/curricula/GuideGrade7-9_LangArts.pdf. Accessed at 02 November 2012

- 1) General English to prepare the English teacher's ability and capability in teaching.
- 2) English for instructional purpose. The purpose is for teaching, so English language teaching across curriculum could prepare the teacher how to teach and mastery English such as a special ability in teaching by using English as foreign language in teaching and learning activity.
- 3) Guided teaching, in this process the teacher practiced teaching guided by lecturer or supervisor who master in English, especially in teaching across curriculum".³⁰

As conclusion, English language teaching across curriculum supports the realization of Immersion program. It provides the teachers which have special ability and capability in teaching using foreign language as well as when they use Indonesia language in teaching and learning activity.

b. English as a Medium of Instruction

At the classes of Immersion program, English is used as a medium of instruction in teaching and learning process. The definition of instruction based on *Oxford Advanced Learner's dictionary* is:

- 1) Instruction is a message of describing how something is to be done.

³⁰ Faridi. A, *Bahasa Inggris Untuk Guru IMERSI dan RSBI*, (Semarang, Cipta Prima Nusantara, 2009), p.13.

- 2) Instruction is the process or act of teaching
- 3) Instruction is the activities of educating or instructing; activities that impart knowledge or skill.
- 4) Instruction relates to the profession of a teacher³¹

While Swain and Johnson provide the following meaning of target language or foreign language (also called L2) as the medium of instruction: “The assumption underlying the use of the L2 as a medium is in other respects essentially that the communicative approach to language teaching. The use of the L2 as a medium is a means for maximizing the quantity of comprehensible input and purposeful use of the target language in a classroom”³².

Hence, instruction is the process or act of giving directions how something should be done in the teaching learning process. In the case of Immersion Class Program, teachers give directions and instructions in the class to be done and understood by the students by using English as the medium of instruction. English is used as the main language in class from the beginning until the end of the class.

English as the medium of instruction is only become the vehicle of content instruction, not the subject instruction.

³¹ Hornby, A.S, *Oxford Advanced Learners Dictionary of Current English*, (London: Oxford University Press, 1995), p.619.

³²Johnson, R.K., and M.Swain, *Immersion Education: International Perspective*, (Cambridge: Cambridge University Press), p.6.

Indonesia Government try to adopt the English language as a medium of instruction of science, i.e. physics in order to ensure that Indonesians are able to keep abreast with scientific and technological development that is mostly recorded in the English language and provide opportunities for students to use the English language and therefore increase their language proficiency.

c. Bilingualism and Multilingualism

Bilingualism and multilingualism is one of the language phenomena in a sociolinguistics scope. There are many opinions about the term bilingualism. The term bilingualism can be found easily in almost dictionaries as the use of two languages.

Mackey (in Chaer) stated “that bilingualism is the use of two languages by substituting certain aspect that is done by a speaker in a conversation. To use these two languages a speaker should consider of these two languages. The first is the speaker’s mother tongue (L1) and the other is the target language (L2). It can be assumed that in a bilingual or even in a multilingual situation, the two or more languages are always in contact”.³³

Moreover, based on Wikipedia, the free encyclopedia; “Bilinguals, who can speak at least two languages, have the

³³ Chaer, Abdul and L. Agustina, *Sosiolinguistik Perkenalan Awal*, (Jakarta: PT. Rineka Cipta, 2004), p.81.

ability to use elements of both languages when conversing with another bilingual” (<http://en.wikipedia.org/wiki/Communication>).³⁴ It is clear enough that bilinguals have the ability to use at least two languages within their conversation.

Tarigan also stated that there are some limitations of a bilingual. It is also derived from some language specialists, “as follow:

- 1) A bilingual is a speaker who can use two languages by substituting each others. (Weinrich, 1953)
- 2) A bilingual is a speaker who produces meaningful sentences in target language. (Haigen, 1969)
- 3) A bilingual is a speaker who could use two languages by substituting each others, but it is very difficult to judge as a bilingual definitely. (Mackey, 1962)
- 4) A bilingual is a speaker who participates in a communication in more than one language. (Fishman, 1962)
- 5) A bilingual is a speaker who has minimally one language skill (listening, speaking, reading and writing) in target language (L2) until minimal level (Macmanara, 1967)
- 6) A beginning bilingual is a speaker who is able to use target language (L2) passively and a little lexical competence to

³⁴ (<http://en.wikipedia.org/wiki/Communication>), Accessed at 03 November 2012.

do transactional events and businesses in target language.
(Dribold, 1961)

- 7) A bilingual is a speaker who speaks only in one language but he/she uses so many varieties, different word lists or registers, and various languages”. (Halliday and Stevens, 1964)³⁵

“There are so many limitations about bilingualism. It happens because of some reasons. In fact, the purpose of the use of two languages is very broad. It has some differences because it depends on the topics, interlocutors, context, from one person to another, and from one area to another area. Hence, it is not so realistic to claim that a bilingualism is always limited as a good competence in two languages perfectly in all contexts, all situations, and conditions”. (Ovando and Callier, 1985: 66 in Tarigan, 1988: 3)³⁶

Besides the term bilingualism, there is also the term of multilingualism. Bilingualism can be defined as the use of many and various languages by an individual in the conversation substitutable. Basically all the principles and the explanations of the multilingualism and bilingualism are almost the same. Hence, in this study it will be emphasized on

³⁵ Tarigan, Henry Guntur, *Pengajaran Kedwibahasaan*, (Bandung: Angkasa Bandung, 1988), p.43.

³⁶ Tarigan, Henry Guntur, *Pengajaran Kedwibahasaan*, (Bandung: Angkasa Bandung, 1988), p.3.

bilingualism only. In general, the use of bilingualism and multilingualism is used interchangeable.

Bilingual even multilingual people cannot always stick to only one language; they prefer to engage at least two or more languages alternately within their conversations. The bilingualism or multilingualism situation also has appeared in Indonesia, as cited by Nababan: It is clear, however, that “practically everybody is a bilingual in the cities and towns of Indonesia, with the people speaking one vernacular or local language (one’s first language or ‘mother tongue’) and Indonesian. In many cases, people speak three Indonesian language, sometimes with one or more foreign languages in addition (with the older generation, the foreign language is often Dutch; with younger people, it will more likely be English)”.³⁷

Bilingualism in Indonesia is a common phenomenon as a result of many factors, especially linguistic factors. Indonesian people speak three languages minimally, namely local languages, Indonesian languages, and foreign languages. Still more, bilingualism is the result of the contact between people speaking different languages. The contact may be due to the displacement of person, either by desires, or necessity, through imagination and settlement, conquest and colonization,

³⁷ Nababan, P. W. J, A Study in Bilingualism and Bilingually in Indonesia. *Journal of Bilingual Education*, (1979, 4/1: 209-221), p.10-11.

travel and education, or conversation an acculturation. Therefore, there are two categorizations of bilingualism in Indonesia, that is, the local-Indonesian languages and foreign-Indonesian languages.

The use of Indonesian language is related to the nationalism and the struggle of the independence. Indonesian language also used as an interaction among ethnic in trading, socialization and others matters related to the education, profession, etc. Furthermore, as the developing country, Indonesia also uses the foreign languages to interact with the international level. One of the foreign languages is English. There can be job reasons, education reasons, international relationship reasons, and society status reasons.

Tarigan stated that “the linguistic differences in the most societies in the world are a norm. Bilingualism exists in every nation in the world, all of the level in a society and all level of age. It is true that English used broadly as a media of communication but it doesn’t mean that English replaces the function and position of native language that exist in the world. The use of English as a technique and scientific language may cause the amount of bilingual is bigger and bigger nowadays. But, although English used and studied as an international language, the official and native language still survive as a

communication means among friends in their society environment”.³⁸

As the result, it is impossible to find an individual who can use two languages in spoken and written form properly. In real social life not all of the bilinguals have the equal competence in the different languages. Some of them may be receptive in one skill and productive in another, being able to speak another language and unable to write it. Meanwhile, others are able to write in languages. The skill in the other language may even be limited to reading ability or simple to oral understanding.

From all the definitions above, the writer can draw a conclusion that bilingualism is contact with possible model in a second language and the ability to these in the environment of the native speaker’s language. Returning to the definition, bilingualism cannot be separated from Immersion program for the government regulation that the teaching-learning process in Immersion program should be delivered in English as the target language and Bahasa Indonesia as national language.

3. Immersion Program

a. Definition of Immersion Program

When applied to language, Immersion is first used to describe intensive language programs, in the 1960s immersion

³⁸ Tarigan, Henry Guntur, *Pengajaran Kedwibahasaan*, (Bandung: Angkasa Bandung, 1988), p.38-40.

education is coined to describe a new form of bilingual education. By today, immersion schooling occurs internationally, for example Australia, Finland, Hungary, Hong Kong, New Zealand, Singapore, South Africa etc.

“Immersion is one of the types strong form bilingual education, immersion is defined as a method of foreign language instruction in which in the regular school curriculum is taught through the medium of language (Met and Lorenz, 1993: 1)”.³⁹ Language immersion is an approach to foreign language instruction in which the usual curricular activities are conducted in a foreign language. This means that the new language is the medium of instruction as well as the object of instruction.

“An immersion program is a device for introducing a non-native language and culture to majority language students with the aim of providing students with native-like language skills in the foreign language”.⁴⁰

According to Hornby, “immersion is absorbing or involve deeply”.⁴¹ Based on the several definitions above, we may conclude that immersion program is a program to provide

³⁹ Colin Baker, *Foundations of Bilingual Education and Bilingualism* (British: Biddles Ltd, 2002), p. 360

⁴⁰ (<http://www.hausarbeiten.de/e-book/414/>). Accessed at 27 November 2012

⁴¹ Hornby, AS, *Oxford Advances Learners Dictionary*, (Oxford University Press, 1987), p.424

students with native-like language skills in foreign language by applying the use of language deeply as a medium of teaching in regular school curriculum.

Based on the age, there are early immersions, delayed or middle immersion, and late immersion. Early immersion is immersion program at kindergarten or infant stage. Delayed or middle immersion is immersion program at nine to ten years old. And late immersion is immersion program at secondary level.

Based on the amount of time spent in immersion, there are total immersion, partial immersion, double immersion, and two ways (dual) language. Total immersion is the type of immersion which the medium of instruction using foreign language fully (100%). Partial immersion is immersion type which foreign language is not used totally, but it is just used in 50%. This type is more appropriate for early immersion (bilingual education for children) because the mother tongue can be helpful in understanding lesson. Double immersion is essentially a full immersion program with instruction in two foreign languages. Two-way (dual) immersion is immersion type which children from each language group are mixed in the same classroom. The goals of two way immersion are for both language groups to become

bilingual successfulness academically and develop positive inter-group relations”.⁴²

There are three headings strategies for literacy in bilingual school: general, reading, and writing.⁴³ By general strategies, the teacher can create a literate classroom environment; encourage collaborative and cooperative learning; or include literacy development as parts of the content of other areas of the curriculum.

In creating a literate classroom environment, the classroom environment should demonstrate the multiple function of literacy. For example, there are many writing in English language around school environment, such as attendance list, subject lesson schedule, class organization, or some writing which is pasted on the class wall.

In encouraging collaborative and cooperative learning, the teacher should encourage children to learn each other as well as to learn from the teacher. Children need to learn cooperatively and independently on project. And also children need to work on literacy events independently and interdependently, with the teacher attending to small groups and individuals to provide attention where it is needed.

⁴²Jack Brondum and Nancy Stenson, *Types of Immersion Education: An Introduction*. The ACIE Newsletter, February 1998, Vol. 1, No.2. 19 July 2007

⁴³ Colin Baker, *Foundations of Bilingual Education and Bilingualism*, (British: Biddles Ltd, 2002) p.343.

Literacy is achievable throughout the curriculum through inter-disciplinary project work. For example, engaging one of the crucial issues of the day may lend critical perspective to literacy development. Such as air pollution, destruction of forest, water use. Those project make learners active participants in their own literacy development, integrate oral with reading and writing development, promote interaction with others as central to literacy development, allow risk taking and initiative, requiring topics that are linguistically stimulating, intellectually challenging, rigorous and demanding so as to enable full literacy development.

In the immersion programs there are some approaches to language learning often taken, those are two introductory points.

First, “it is important to repeat the distinction between teaching a language and mostly through the second language being used as a medium of instruction in fifty percent to one hundred percent of the curriculum. Second, allied to the idea of language as a medium of instruction is the idea language across the curriculum (Corson, 1990a)”.⁴⁴ This is a view that language plays a central role across the curriculum. In all curriculum areas, students learn skills, knowledge, concepts and attitudes mostly through language. Thus, every

⁴⁴ Colin Baker. *Foundations of Bilingual Education and Bilingualism* (British: Biddles Ltd, 2002) P. 357

curriculum areas, from history to mathematics, science to sport, contribute to the growth of a child's language. At the same time, mastery of a particular curriculum area is partly dependent on mastery of the language of the area. Obtaining fluency in the language of chemistry, history or mathematics, for example, is essential to understanding that subject.

b. The Goal of Immersion Program

The long-range goals of an immersion program includes:

- 1) Developing a high level of proficiency in the foreign language
- 2) Developing positive attitudes toward those who speak to foreign language and toward their cultures
- 3) Developing English language skill equal with experience for students' age and ability
- 4) Gaining skills and knowledge from the curricular activities of the curriculum in keeping with stated subjectively in these areas.

According to JSIS Guidelines for language immersion program (2005), there are three goals of language immersion program. They include:

- 1) Acquiring the immersion language
- 2) Acquiring the native language
- 3) Achieving in the curricular activities

According to the explanation above, we recognize that immersion program which is applied in some schools is

intended to develop students' comprehension about the foreign language they learn and to gain skills and knowledge in the curricular activities or the curriculum.

c. The Advantages of Applying Immersion Program

Immersion program is intended to develop students speaking skill in order to enable them communicate actively in the target language which is applied in the classroom. According to Stein (1999), “there are several advantages that could be taken from this program. They are:⁴⁵

1) Developing nonacademic vocabulary

While immersion learner’s academic vocabulary develops over the years, the development of their non-academic, everyday vocabulary appears to lag behind. Example of everyday topics are clothing, toys, food, sports, greetings, family, professions, shopping, travel, likes and dislikes, feelings, etc. Tarone and Swain refer to immersion student’s progress through the grade levels. They suggest that “the sociolinguistic environment within the immersion classroom might be described as diglossic. A diglossic language context reserves the use of one language for certain communicative purposes and the second for others. Students in immersion classroom have been observed the use the immersion language to

⁴⁵ Stein, M. *Developing Oral Proficiency in the Immersion Classroom*. (Arlington: Arlington Public School, 1999), P. 43.

communicate about academic topics but to switch to their first language for informal, nonacademic speech”.⁴⁶

2) Increasing the Accuracy

“The term accuracy relates to correct use of linguistic structures (grammatical accuracy), appropriate use of register (sociolinguistic accuracy), precision of vocabulary (semantic accuracy), and proper use of cohesive devices (rhetorical accuracy) (Omaggio, 1986)”.⁴⁷

Immersion research, which for the most part has concentrated on grammatical and sociolinguistic accuracy, show that immersion learners fall behind native speakers in both of these types of accuracy.

3) Increasing Ability to make form-meaning connections

“Making form-meaning connections can be described as the language learner’s ability to notice the linguistic structure while the interpret or express the meaning of an utterance (Schmidt, 1990)”.⁴⁸ Immersion learners, who process language primarily for meaning, need instruction that includes encouraging the learner to

⁴⁶ Tarone, E., & Swain, M. *A Sociolinguistic Perspective on Second Language Use in Immersion Classrooms*. (The Modern Journal, 79, 166-178,1995), p. 32.

⁴⁷ Omaggio, H.A, *Teaching Language in Context*, (Boston: Heinle & Heinle, 1986), p.54.

⁴⁸ McNeil, J.D. 1990. *Curriculum: A Comprehensive Introduction*. (London: A division of Scoot, Froesan and Company, 1990), p. 23.

process language for meaning and form at the same time. This does not mean that the learner can explain a linguistic rule such as noun-adjective agreement or talk about nouns, adverbs, etc.

From the explanation above, we notice that there are several advantages can be taken from applying immersion program to the students. Some of them are enriching students' vocabulary; increasing students' comprehension about language structure; and increasing their ability to make form-meaning connections.

d. Teacher in Immersion Class Program

The success of immersion program depends on the strategies which are applied to manage this program. Without correct strategies, it is going to be hard for the school that applies this program to create a success story about this. The strategy includes the selection of the teachers. The teachers at the classes of immersion program are selected by the school itself. As the teachers of immersion class, they should not only master the subject well but also have the ability of English both oral and written. They have to learn about some English expressions and gambits like how to open the lesson, give instructions and compliments, and end the lesson, etc. The most important thing is that they have to master some terminologies dealing with the subjects they taught. For example, physics teachers, they have to learn how to read

physics text and formulas. Hence, the school has to prepare the selected teachers to be able to speak English. Teachers must get some training. They must learn about four skills in English; listening, speaking, reading and writing.

To teach in immersion classes, a number of preparations should be done by teachers. One of them, they have to prepare the instructional material written in English. They are supposed to make syllabus, lesson plan, and learning media in English before they teach in order to run teaching and learning process well. They have to be able to find the materials from any sources by reading some books or using internet. They have to be trained how to conduct the teaching and learning process in English by preparing the materials and write the lesson plans and also trained how to assess the students' assignments. Furthermore, teachers of immersion program not only 20% of them should be postgraduate, but they also should master English and be able to use ICT facilities during teaching and learning process for supporting the teaching and learning process.

From the statements above, it is clear that to gain success in immersion classes, the teachers should be familiar with linguistic structure in the target language. It means the teachers should have sufficient knowledge about the language they teach. They must also encourage the students to be active in communication in English.

e. Teaching Physics in Immersion Class Program

Talking about physics, Shipman and Wilson (1990: xvii) stated that “physical science is the organized knowledge of our physical environment and the method used to obtain it”. Physical science studies the nonliving thing in the universe. It is clear that this is the largest and most useful tool we have for taking the occurrences of nature, of a vast variety, and making them reasonable to human’s mind.⁴⁹

Teaching physics in English as a foreign language involves some new things. The main one is that students are learning not only the subject-matter knowledge and skills, but also the specific terminology which is the medium of instruction for that subject. Hence, the teacher and the students are supposed to do higher effort to rich the target of the study.

The curriculum that is used to teach physics at the classes of immersion program is the same as those for regular class. The curriculum is School Based Curriculum. In this curriculum, many methods are used to teach at the classes of immersion class program, especially methods that can make the class more active, creative, effective and satisfying.

Moreover, the handbooks used for immersion program classes’ students are the text books which are suitable with the School Based Curriculum which has been translated into

⁴⁹ Shipman, J.T. and J. D, Wilson, *An Introduction to Physical Science*, (6th Ed), (Canada: D. C. Heath and Company, 1990), p.xvii.

English and some other books that have not been translated into English yet. Both the students and the teachers used bilingual handbooks.

Despite of the criticism which points out bilingual education, this new trend in education is very helpful with the condition of rethinking learning and teaching principles that support in the acquisition of both language and content. This bilingual method becomes the solution for the school that has not used 100% English as the medium of instruction in teaching learning process yet.

The effectiveness of bilingual approach, as the writer quoted on <http://www.clilcompendium.com/clilcompendium.htm> is “revealed by the multiple advantages entailed by it: (1) build intercultural knowledge and understanding, (2) develop intercultural skill, (3) introduce the wider cultural context, (4) prepare for internationalization, (5) access international certification, (6) enhance the school profile, (7) improve overall and specific language competence, (8) develop communication skills, (9) deepen awareness of both mother tongue and target language, (10) prepare for future studies and/or working life, (11) develop multilingual interest and attitudes, (12) complement individual learning strategies, (13)

diversify methods and forms of classroom teaching and learning, and (14) increase learner motivation”.⁵⁰

Teaching and learning process at the bilingual classes especially at immersion class program should apply learning to know, learning to do, learning to live together and learning to be. The teacher should create atmosphere of the class to be more active, effective and creative, so the students will enjoy learning in the class.

Furthermore, there are some advantages of this bilingual program both for the teachers and the students; “increasing the accuracy and ability to make form-meaning connections. The term accuracy relates to correct use of linguistic structures (grammatical accuracy), appropriate use of register (sociolinguistic accuracy), precision of vocabulary (semantic accuracy), and proper use of cohesive devices (rhetorical accuracy) (Omaggio, 1986)”.⁵¹

According to the explanation above, there are several advantages can be taken from applying bilingual program by using English as the medium of instruction in delivering physics subject at the classes of immersion class program. In addition, in a class where student has got a good level of

⁵⁰ <http://www.clilcompendium.com/clilcompendium.htm>, _Accesed at 3 November 2012.

⁵¹ Omaggio, H.A, *Teaching Language in Context*, (Boston: Heinle & Heinle, 1986), p.67.

English is that they won't focus on language in the detriment of subject content. Evidently, using the language in a new field leads to the raising of student confidence by inducing the awareness of the value of transferable skills and knowledge.

f. Immersion Program for Senior High School

1) Immersion Program in Central Java

Based on Wibowo (2009) "there are some schools which are implementing immersion program. They are spread out into regencies in Central Java, such as Semarang (SMPN 5 and MAN 1), Magelang (SMPN 1 and SMAN 1), Slawi (SMPN 1 and SMAN 1), Surakarta (SMPN 4 and SMAN 4), Purwokerto (SMPN 2 and SMAN 2), and Pati (SMPN 3 and SMAN 1)".⁵²

According to Faridi the "percentage of the using English is adjusted to the ability of the teacher in using English. In early activity, the use of English to teach in class can be done in stages, from 10, 20 or 30%, but if already running, it hopes it can reach 60%".⁵³

As stated by Ofelia Garcia and Colin Baker (2007) in Faridi (2009), immersion steps can be divided into (1) Early Total Immersion; (2) Early Partial Immersion for

⁵² Wibowo, <http://www.sampoerna foundation.org/ content/ view/235/48/ lang.id/> Accessed at 12 September 2012.

⁵³ Faridi. A, *Bahasa Inggris Untuk Guru IMERSI dan RSBI*, (Semarang, Cipta Prima Nusantara, 2009), p.2.

elementary students, here, the teacher teaches the lesson using verbal and non-verbal in target language; (3) Delayed Total Immersion and (4) Delayed Partial Immersion for junior high school students which already uses complete language aspect and program; (5) Late Total Immersion and (6) Late Partial Immersion for senior high school or adult.

2) The Characteristics of the Students in Immersion Class of Senior High School

“The ability of second language learning varies from person to person (Mackey, 1985:120)”.⁵⁴ It depends on various reasons involved that influence English mastery among the learners. Based on the statements, the writer eagers to know the characteristics of the students in immersion class in senior high school as the subject of the study.

It is popularly assumed that in second language learning, the earlier the children learn, the better. The students in immersion class of senior high school have been familiar with English, either spoken or written. They are generally between 16 to 18 years old.

Language learning is also influenced by the learner’s motivation. The students of the immersion class

⁵⁴ Watkins, C, *The Teacher’s Role in Learning Process*, (Online, Available at (www.rosindust.com), Accessed, 4 November 2012

in senior high school are usually highly motivated because their class is a favorite class which is conducted with English in every subject. Being the member of this class is a prestige.

Other factors that might influence the foreign language learning are intelligence and personality. Those are generally owned by the students in regular classes.

3) Immersion program in MAN 1 (Islamic State Senior High School) Semarang

MAN 1 (Islamic State Senior High School) Semarang is one of some schools which holds immersion program. It is chosen by the government because MAN 1 Semarang has the requirement to hold an immersion program. The requirements are they have teachers with good qualities, they have students with good quality, and they also have good equipments.