Article

The Development and Application of Bilingual Engineering in an Education Institution (A Case Study in RMB)

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A B S T R A C T

Teaching Speaking effectively is one of problems in the field of language teaching. Many teachers and schools are frustated in activating students' speaking ability. We need a research to find an appropriate teaching method and teaching strategy to handle the problem. This qualitative research was applied by using *system perspective*. Theoretically, system perspective is a study of system by questioning: how and why a system entirely works as it should be. The researcher will come into the system, observing how the bilingual engineering is applied. The object of the research will be focused on observing the forms of bilingual engineering and all parties' opinion related to applying bilingual program. The researcher also did literature study as a comparative study especially related to bilingual theory. The result of the research shows that the program is success. It is shown by the good satisfaction level. Satisfaction will be able to improve school's academic achievement. Finally, the researcher believes that the application of the bilingual program has a significant implication to the school's overall achievement.

INTRODUCTION

The greatest challenge for English language training professional and educational institution is how to make the language training participant being active in speaking English (fluent). The students need a special approach generally. From this general situation, researcher is trying to find the core problems and the best formulations to solve the problem.

Many institutions have created various program to develop English language teaching in its system. They have applied it in its environment. Some of the institutions only develop it by adding the portion of English language training in their curriculum. Some bonafide schools develop immerssion program, in collaboration with *sister school* from abroad. The last model has a big consequency in financial budgeting. It will be a serious problem for many schools in Indonesia.

In immersion program, a big financial budgeting is not the only problem actually. Students' mentality is the other problem. In this program, the environment of the school immers the participant of the English teaching process. The institution will create English speaking environment to activate the students' English as the target language. The school will need a special environment to support this program. One of the supports is a *sister school* as the partner in student's exchange. Program of student's exchange is very important to improve English speaking skill of the student. As we know, in Indonesia, speaking in

foreign language as like English becomes something frightened for many people. Many people in Indonesia do not have enough confidence to use it in daily speaking.

Beside the program we have explained above, there is also another program will be interesting to be applied in the school. It is bilingual program as the other alternative from the three alternative we have discussed before. If financial budgeting becomes a problem of applying immersion program, so bilingual program is the solution for it. It is the answer of the problem. If mentality of the student in speaking English is the other problem of immersion program, so bilingual is also the answer. By applying bilingual program can boost students' English speaking quality gradually. The cost is also much more affordable.

The proccess of applying English in the school environment is very gradual in bilingual program. The shifting of the L1 (mother language) to L2 (target language) (Krashen, 1995) as shown on the diagram will be very smooth. So the students will not be shocked with the language change. The one we need is number of teacher as the agent of change in this program.
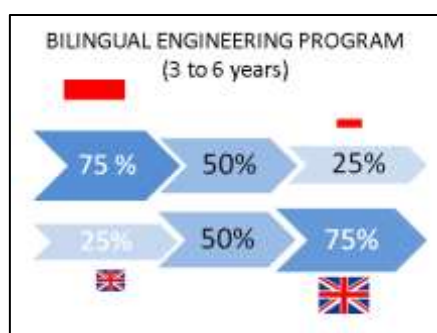
Gambar 1. Bilingual Engineering Program (Source : Doc of NEC)

Applying bilingual engineering is used to solve the stating problem because the researcher believes that all the activity on bilingual engineering will have a very significant impact to the students' achivement. The study of bilingual is also quite rare and new in Indonesia. So, it is going to be really interesting to be discussed.

METHOD

1. Research Paradigm
The researcher team did the research by using the system perspective approach. The definition of system perspective approach teoritically was a study of system questioning: how and why a system entirely worked as it could be. The research also learned the *bilingual engineering* in the system and the items to support the program. The researcher got into the system observing how the bilingual engineering was applied.

The engineering of the bilingual becomes the main focus of the research. The researcher tried to figure out the formula of the bilingual engineering. What kind of activity the bilingual engineering, how to design it, how to apply it, what the function and benefit of it to the program and so on. Knowing the effects of bilingual engineering toward students' achievement is really important for us and especially for program designer. Analyzing the obstacle of the program and the opinion of the teachers, students and parents become the sub-point of the research.

The research was a desciptive qualitative research. The process and the result of the research were conveyed descriptively (Sugiyono, 2008). The main target of the research was to describe, to interpret and to understand the system of the program deeply in order to be able to create development and exploration (Arikunto, 2010).

2. Background Description
The background of the research is the curiosity in understanding the implementation of bilingual engineering application in an educational institution. In this case, it is a school. The research was designed to analyze how far the bilingual engineering worked well in the school as the object of the research. Because of that reason, so the research takes a study case straight on the field. On this case, the researcher went straight to the school for observing and interviewing, analyzing how the program worked out.

The research took place in Raudhatul Muhibbin or much more popular as RMB. It is a primary and junior high school. An educational consultant helps the school, in applying the program. It is *National English Centre* (NEC). The consultant, NEC has many in collaboration bilingual project with many schools partner. On of it is RMB, a school located in Cibitung sub-district in Bekasi.

3. Technique of Data Collection
On the research, the researcher used this following steps in collecting the data :

a. Observation
Observation method means the activity of collecting data through the activity of observing the object, the activity and the process intensely. It was carried out in order to understand, to figure out the answer and to seek the information related to the application of bilingual engineering in the certain period of time. It was done without interfering or even influencing the phenomenon as the object of the observation.

b. Interview

Interview is a method in collecting data by the process of questioning and answering the information from the source person face to face. We did it to dig the detail information deeply especially the information about the application of bilingual.

c. Documentation

We need information to give a clear description of bilingual engineering program in RMB. The researcher analyzed the document taken from the school (RMB) and the consultant (NEC).

d. Literature Review

Literature review is needed to achieve some supporting data of the research. Especially some data related to the basic theory of the research. An academic works as like as a research needs a basic theory to keep the activity of the research focus on the right track.

4. Method of Data Analysis

On this research, since the beginning of the data collection, the process of data analysis had been applied. But, after the researcher understands the phenomenon of the object of the research, so the process of analysis is much more focus. The activities of data collection are:

a. Deciding the focus of the research, is it still on the track? Does it need some changes?

b. The arrangement of the temporary inventions based on data have been collected.

c. The creation of the next data collection planning based on the previous invention.

d. The development of the analytical questions in order to the collection of the next data is needed in deepening of the problem.

e. The decision of the targets of the next data collection.

The next step was data reduction. Data reduction was the process of classification, simplification and abstraction of the information. The process of reduction was applied continuously during the process of data collecting in the research.

After the process of data reduction the information from the data became much more simple and easy to be understood. The next step was the presentation of the data. It meant how to arrange number of information well in order to be able to be summarized easily. So the process of making decision would be also easy. The presentation of the data would be conveyed in a narrative text form.

After the data was presented well, the final step was the process of making summary. The process could be applied only when all the stages had been done well. Since the begining of the research, the summarizing process actualy had been started, but the final summarizing process was done after all the process of the research finishing line.

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RESULTS AND DISCUSSION

1. The Identification of Bilingual Program

The English teaching in RMB is not only the transferring of knowledge. In the context of *English Language Training* (ELT), it is called as *Teaching English as Second Language.* So the process is not like a TEFL or (*Teaching English as Foreign Language*). In teaching English as a second language, the process of teaching is not only the process of improving knowledge but also the process of skill coaching.

In applying the program, the school is not alone. RMB is in collaboration with an English language consultant. The consultant's name is National English Centre (NEC). The National English Centre is an English teaching consultant located in Jakarta. NEC has 2 popular programs related to English teaching program, they are: *HELP (Healthicare English Language Program*) and *BEST (Bilingual Education System Training).* Both are not only popular but also unique. *HELP* is a special program of English training for nurse, doctor, pharmacist, nutritionist, lab technicion and some other professions related to medical issues. *BEST* is a special program for school in applying bilingual program. NEC will help and guide the school in applying the program.

Bilingual Education System Training is one of best products of NEC in collaborating with some school partners. Most of them are bonafide private schools.The bilingual Education System Training becomes the target of the research, especially on its application in RMB. It is a school in Cibitung Bekasi.

2. Bilingual Engineering

In many places in Indonesia, many schools have applied bilingual successfully. So many language trainers and educators in Indonesia have been successful applying bilingual engineering. In the context of Indonesia, Bahasa Indonesia is the target language (L2) and traditional language is the mother language (L1).

Indonesian people learn Bahasa Indonesia as it is not as difficult as learning a foreign language like English. Especially the position of Bahasa Indonesia as *the lingua franca* in Nusantara makes learning it much easier than learning the other language. There are many similarities of vocabulary, structure of the sentence, pronunciation and others. Besides those facts, there are some factors becoming key of success of the bilingual program of Bahasa Indoesia teaching process in Indonesia. So, those factors become interesting to be learned and to be analized and finally, to be applied in the context of English teaching.

Learning from the application of teaching process of Bahasa Indonesia, they are some information and experiences about applying bilingual. The success of Bahasa Indonesia as the target language is a proof. The support of system, the facilities, the support of programs and the support of Indonesian native speaker (teacher and educational supporting officer) have been ready for interacting with the students. Lower classes in primary school use mixed classroom language (Bahasa Indonesia and traditional language) in many places in Indonesia. The higher level of the student, the more proportion of Bahasa Indonesia is given. Finally, Bahasa Indonesia will be used 100%. It makes Bahasa Indonesia is as a must. In formal and official relationship in many national institutions, news on national TV, Bahasa Indonesia forces Indonesian citizen to use it.

What the researcher said as a bilingual engineering, actually has been formed and applied by us, Indonesian people. It has been ready to be applied for another language as like as English. The point is that it needs to be dug deeply to be applied in the English teaching process in the schools. The process of adjusment and modification automatically will be needed in this case.

Bilingual engineering can be defined as the process of planning and the process of applying many activities in a bilingual teaching program (Whitman, 1975). The process involves many activities. The activities applied will be able to improve the bilingual skill of the participants. So in general, bilingual engineering can be also defined as the process of creation of supporting environment which is able to support the student in improving the target language well.

The researcher found some bilingual engineerings in the school of RMB. The research such as *guardian teacher (GT)*, *booth mania, bilingual teacher training*, *dinar money system*, *market day*, *native speaker* and *science class* will be explained below:

a. Guardian Teacher (GT)
The lack of English active speaker is a problem in many English applying programs. It can be solved by placing *guardian teacher (GT)* in the bilingual school. The *guardian teachers* are teachers who are placed by the consultant (NEC) to support school teacher applying more English inside and outside the class. By the existing of the *guardian teacher,* the chance of the student's interaction in English is bigger.

b. Booth Mania
In Booth Mania**,** the Guardian Teacher directs the students to practice English in many opportunities in the school's environment. Besides improving numbers of influencers by adding *Guardian Teacher*, the school also needs to make many opportunities. The Booth Mania is one of them.

In this event, every student takes a line to get a turn accepting the challenge to practice English with the guardian teacher. The challenge could be quiz, dialog/conversation and so on. The difficulties of the challenge depends on the level of the student.

c. Bilingual Teacher Training
Beside the placement of *Guardian Teacher,* the consultant also provides a special training for the school teacher. The consultant provides *Bilingual Teacher Training* for helping teacher improving English skill especially speaking and applying it in the program. So the target of the training is school's teacher of RMB School. By providing this program, the communicative skill of the school teacher will be improved.

d. Dinar Money System
Motivating students to always be committed using English needs a special strategy. In this program, we make a special system to appreciate students communicating in English. The tools is *Dinar Money System (DMS)*. Dinar is a currency money system made by the school in collaboration with National English Centre. It uses as a reward for the students. The student can get it by participating actively in the booth mania or other English activities.

e. Market Day
Market day is an event in the school. It is designed to practice English in a communicative activity. In the market day, all dinar has been collected by the students can be used for shopping. All the student can buy anything such as: food, beverage and stationary with their dinar they have as a reward. It is not only an appreciation but also a media for practicing English. The event of market day can be held per semester or yearly depending on the school.

f. Native Speaker

Inviting native speaker is important to motivate students practicing English diligently. Speaking English with Indonesian teacher only can be boring and un-challenging. Speaking in English with native speaker can be an interesting alternative. It can be a wonderful experience for the students who are studying English.

g. Science Class

The lesson of science is the most possible lesson to be delivered in English. It is easy to teach science in English. It is much easier than

teaching other lessons such as: social or religion. It is because in science, the terminology is mostly universal terminology. So it is easy to find the terminology of science in English. Some of them have been the same.

3. Supporting Activities

The bilingual consultant, NEC controls all the activities of bilingual engineering. They provide men power, prepare all property needed and set the activities time table. The school also tries to make a breakthrough by creating some supporting activities. In the opinion of the researcher, the supporting activities also have a significant contribution to the progress of the student and the development of bilingual engineering in the school. The supporting events are:

a. Super Camp

Super Campis is the other important activity in the bilingual engineering, especially to create condusive atmosphere to practice English. Beside practicing and studying, the atmosphere of competitiveness is needed to develop, to motivate and to build champion mentality among the students. Super Camp is the right solution in this case.

b. Abroad Trip

An overseas journey is no longer expensive nowadays. There are many packages to travel to abroad. Especially ASEAN countries, travelling abroad has been very common. Travelling abroad with a little modification, good design and right handling will be able to be a good activity as a supporting activity

of bilingual program. It can be created to support students becoming fluent in speaking English.

4. Supporting Facilities

In applying a bilingual program in a school, the system does not need any special facility to support it. Actually the key words of the applying of bilingual is on the human resources. The more active English speaker teacher to activate students English speaking ability so the better result will be obtained.

Number of language events also influence the result of the bilingual program. Language event is a media for the students to practice their speaking ability in English. The event should be interactive, attractive and challenging but still fun for the stuudent.

The program does not require a certain physical facilities to be used to support this program. The facilities, such as language lab is not directly used to suppport the program. The lab is still needed for practicing "listening". But it is only optional for running this program.

5. Parties' Perception

The researcher has spread the questionaire randomly. It is to measure the perception of students, parents and teachers to the program. We analyze it to get the right conclusion of the program. Here is the description of the parties perception:

a. The Importance of English

Table 1. Perception about the Importance of English

	Student	Parent	Teacher
Very Unimportant	1%	0%	0%
Unimportant	5%	0%	0%
Fair	5%	0%	0%
Important	12%	56%	67%
Very Important	77%	44%	33%

The majority of the parties agrees that English is important. It is only 1% of the student states that is very not important. None of the parent and also the teacher state that English is not important or not very important. They do not even state that the lesson of English is fair. All parent and teacher state that English is important or even very important unanimously. The most interesting fact is, almost 77% of the students think that English is very important for them.

b. The Perception about the Bilingual Program

Table 2. Perception about the Bilingual Program

	Student	Parent	Teacher
Very Unlike	0%	0%	0%
Unlike	1%	0%	0%
Fair	10%	2%	0%
Like	19%	49%	78%
Very Like	70%	49%	22%

Generally, the majority of the student, parent and teacher are happy and very glad to the application of the bilingual program in their school. The students who state to like the bilingual program so much is 70%. It is only 1% of the student who is not like the program. With the 70% students who like the program, the program has been success increasing the student's motivation in studying English. So the program has been successful so far.

c. Students' English Progress

Table 3. The Progress of the Student

	Parent			Teacher		
	SMP	SMA	PT	SMP	SMA	PT
Really Unsure	0%	0%	0%	0%	0%	0%
Unsure	0%	0%	0%	0%	0%	0%
Fair	5%	4%	9%	0%	0%	0%
Sure	74%	70%	60%	56%	56%	56%
Really Sure	21%	26%	31%	44%	44%	44%

The analysis of this research has described that the program of bilingual engineering is successful. It has been successful in improving the students' ability in speaking English. Unfortunately, because the limitation of budget and time, the research only focuses on the form of bilingual engineering as a qualitative research. So the research is not calculating and measuring some quantitative facts in details. For the deeper analysis, we need a deeper assessment.

d. The Students' Self Confidence Progress

Table 4. The Progress of the Student

	The Obstacle for The Teacher
Very Difficult	0%
Difficult	67%
Fair	11%
Easy	22%
Very Easy	0%

As the ability of some English skills, students, parents and teachers asume that students' self confidence has also improved by joining the program of bilingual in the school. Interestingly, it is 58% of the students become very confident in practicing English, especially shown by speaking English to the instructor confidently. On the other side, parents and teachers who believe it, it is only 10% - 11%. The majority of the parent and teacher is about 67%, they believe that the students only become more confident (not very confident). Whatever happen, basically it shows that the program has a very significant correlation to the improvement of students' confidence.

e. Students' Perception Related to Learning Obstacles

Table 5. The Progress of the Student

	Student	Parent	Teacher
Very Difficult	0%	0%	0%
Difficult	0%	5%	44%
Fair	11%	44%	11%
Easy	34%	44%	45%
Very Easy	55%	7%	0%

The student does not get a serious problem when the school applying the bilingual program. It is contradictive with the teachers. Numbers of teachers got a serious problem when the school applying the program for the first time. In the first period. It is 44% of the teacher feels difficult, 45% feels that the applying of this program is easy. The other 11% is fair. It happens because some teachers have a very limited English speaking skill. They speak English but not really fluent.

f. The Perception of the Program Application

Table 6. The Perception of the Program Application

	Student	Parent	Teacher
Very Bad	0%	0%	0%
Bad	0%	0%	0%
Fair	5%	19%	0%
Good	15%	65%	89%
Very Good	80%	16%	11%

The majority of the parent feels sure that the program is proper enough to be applied in a higher education level (SMP, SMA dan PT). And also about 56% of the teachers. They have a similar perception with the majority of the parents. The rest, 44% of the teachers even so sure taht the program is very propor to be applied in college or university.

g. Teachers' Obstacles

Table 7. The Obstacle of the Teacher

	Student	Parent	Teacher
Very Unconfident	0%	0%	0%
Unconfident	3%	2%	0%
Fair	8%	21%	22%
Confident	31%	67%	67%
Very Confident	58%	10%	11%

The table and graph shown that most of the teacher gets some difficulties teaching on this program. Only less than one quarter of the teachers asumes that teaching on this program is easy. None teacher feels that teaching on this

program is very easy. It is 11% of the teacher feels teaching on the program is fair. It means that the application of the program should be accompanied by the teacher program. The program should be followed up by the improvement of the teachers' skills.

6. Discussion

Basel dan Hidayat (2011) stated that many functions and purposes of bilingual application. It has also many various names. The names of the programs are *Dual Language Program, Dual Instruction Program, Immersion Program, Educating Second Language* atau *English Enrichment Program.* All of the name mentioned, related to the applying second language as the istruction in the schooling acivity**.**

In general, it has major similarity. But in fact it has some technical differences from one to others. The research is only focussed on the bilingual engineering which is applied in RMB, so the discussion is also only on the uniqueness of the application of bilingual program.

Most of the previous studies of bilingual program are focused on historical and socio-political background. They did not discuss the focus about the technical application. This research focuses on observing the activities of bilingual engineering as well as the perception of students, parents and teacher on bilingual program.

All programs of bilingual engineering are designed by the consultant. National English Centre (NEC). The consultant designed the program for the school based on the situation of the school and the starting ability of the students. Analysing is needed to be able to provide the best and the most appropriate program for the school.

Every school is unique. Different school needs different treatment and different engineering program. Beside it, evaluation is always needed to improve the program and to match it to the school and the students' need.

The uniqueness of the bilingual program is the existence of engineering activities to create good environment in applying speaking practice in natural way. It is the first research focused on the bilingual engineering activities and it is found that the bilingual engineering activies are effective to improve the students' speaking abilities and students' learning satisfaction.

Basically, all the program of bilingual engineering is designed to improve the English speaking interaction for the students. The more speaking activity is provided for practicing English, the more active the students will be.

Special teacher, called as guardian teacher GT) has a very significant position in this case. Guardian teacher is the key of the program. They are the activator of the students in the bilingual program. Interestingly, their position is not only as an English teacher but as an English speaking partner for students in the school.

English speaking teacher is very important to apply the program. It becomes the most major problem in many schools in Indonesia. It also happens in RMB. The consultant realized it by providing a bilingual training for the school teachers. The purpose of the training is to activate teachers' speaking ability in English. Unfortunately, the researcher finds that the training is only one level training. In the opinion of the researcher, the training should be provided level by levvel. Therefore, the placement test is needed.

By providing placement test and providing level-based training, the teacher will be able to join the training according to their capacity. The training will be given based on what they need. The result will be much more effective then.

CONCLUSION

The research summarizes some interesting points. They are:

1. The definition of bilingual is an ability in applying 2 languages. Based on Indonesian linguist, bilingual is "dwibahasawan". It is someone who has an ability to speak in two languages.
2. Based on the research, it is found at least 6 main programs designed and managed under the supervision of NEC as the bilingual consultant. They are: *guardian teacher (GT)*, *booth mania, bilingual teacher training*, *dinar money system*, *market day*, *native speaker* and *science class*. Besides them, they are also 2 supporting programs excluding of the consultant's package. They are handled by the school itself. Those supporting programs are *abroad trip* and *supercamp*.
3. Not only enjoying the bilingual program, the student also does not get any significant difficulties joining and studying in the bilingual program. But, the researcher noticed 2 problems related to the applying of the program. The first, some parents and students believe that their confidence in studying English has not been improved by the program. It is suggested that the consultant and the school have to add and to create another effective form of bilingual engineering to improve the courage of the students to speak in English actively.

4. The second problem is the interesting one. Almost a half of teacher gets some difficulties in joining program as a teacher in bilingual program. The problem is the skill of the teachers' speaking ability. It is the biggest obstacle in applying the program. The selection on English speaking ability in the teacher's recruitment and integrated teacher training are the right answer for this problem.

5. The school which will apply bilingual program must analyze and design the most appropriate engineering program based on the condition of the school. Only the match activities will give the best significant impact to the result.

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