

ANALYSIS OF STUDENTS' COMMUNICATION STRATEGIES IN ESP CLASS OF MATHEMATIC STUDY PROGRAM

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Abstract

Penelitian ini bertujuan untuk mengetahui strategi komunikasi apa yang sering muncul selama proses pembelajaran di kelas ESP, menemukan *code switch* yang terjadi selama proses presentasi, dan mengetahui maksud dari *code switch* yang digunakan oleh mahasiswa. Penelitian ini adalah *non experimental descriptive study*. Sample dari penelitian ini ada 20 mahasiswa baru dari kelas A program studi pendidikan matematika di Universitas Lampung. Hasil dari penelitian ini menunjukkan bahwa dari 12 CSs, mahasiswa menggunakan 9 CSs. Kemudian strategi komunikasi yang sering digunakan oleh mahasiswa adalah *code switching* (36,28%), *appeal for help* (16,03%), and *time gaining strategy* (30,37). Di sisi lain, terdapat 3 jenis *code switching*; *inter-sentential switching* (51,16), *intra-sentential switching*(41,86), and, *tag switching* (6,98). Terlebih lagi, berdasarkan hasil dari *code switching*, hal itu dapat disimpulkan bahwa *code switching* disebabkan oleh 4 faktor; mereka adalah kata, frase, penghindaran kesalahpahaman, dan kemudahan berkomunikasi.

The research aimed to find out what communication strategies were mostly appeared during the learning process at ESP class, to find out the *code switch* occurred during the presentation and also the meaning of the *code switch* that the students used. This research was *non experimental descriptive study*. Samples in this study were 20 fresh college learners of mathematic study program in A class at University of Lampung. The results show that, of the 12 CSs available, the students used 9 CSs. Then, the CSs that were most frequently used by students were *code switching* (36,28%), *appeal for help* (16,03%), and *time gaining strategy* (30,37). On the other hand, there were 3 types of *code switching*; *inter-sentential switching* (51,16), *intra-sentential switching*(41,86), and, *tag switching* (6,98). Moreover, based on the result of *code switching*, it could be concluded that *code switching* was caused by 4 factors; they are word, phrase, avoidance of misunderstanding, and easier communication.

Keywords. Communication Strategies, Code Switching, ESP Class.

INTRODUCTION

Communication is one of the main goals in learning English, and this skill is very important to be achieved by all of the English learners. Communication is a continuous process of expression, interpretation and negotiation (Savignon, 1983:8). A successful communication refers to passing on a comprehensible message to the listener. Communication is not only happen in the L1, but also in L2.

Canale (1980) also states that to keep the conversation goes on, the speakers need some strategies for their communication. Since no individual's linguistic repertoire is perfect, most people have experienced struggling to find the appropriate expression or grammatical construction when attempting to communicate their meaning. The steps taken by language learners in order to enhance the effectiveness of their communication are known as *communication strategies* (Littlemore, 2003).

The research had been conducted by Ikawati (2011). The research was about communication strategies *employed by the students at SMA Negeri 8 Malang*. She found that the subjects did not employ L2-based strategies for example Circumlocution, Word-Coinage and Foreignizing because they considered those strategies difficult and they were not familiar with. The most frequently employed strategies were The Use of Fillers/ Hesitation Devices (23.97%), Repetition (15.7%), Message abandonment (15%), and Code Switching (15%).

Hantia (2014) has investigated ELT learners' communication strategies in ET media class at University of Lampung. The result shows that there are seven types of communication strategies produced by students of ELT learning subject matter at University of Lampung: Message Abandonment, Topic Avoidance, Use of All-Purpose Words, Non- Linguistic Signals, Code Switching, Appeal for Help, and Time Gaining. The results also show that communication strategies occurred more frequently in the class that used EXCLUSIVE learning.

Meanwhile, the researcher also personally experienced a situation when she was a fresh college student of ELT at University of Lampung. She had a presentation

which was the topic had been selected and also when she became a listener of the presentation. She found some difficulties to deliver the message and the content of the presentation. Firstly, when the classmates and she wanted to ask some questions but they felt afraid. They did not want to ask the questions themselves, the answer was because they were afraid that their English would look bad so that the other friends and lecturer will judge them. Secondly, in the communication there were some problems that the researcher and other ELT learners got. When the communication became complicated and detailed, there were so many vocabularies that we had used. The learners also used some communication strategies that would help them in their communication. But when the problems in the communication became complicated, they prefer to change their communication from L2 to L1. This is such of changing named code switching. The researcher wanted to find out about when and why code switching happened in the communication.

Retnawati (2015) conducted a research about code switching used in conversations by an American student of the *Darmasiswa* program. The most significant function is to emphasize the message which gets the highest percentage (27.6%) and intention to clarify the speech content to the other interlocutors is the most significant factor causing code switching which gets highest percentage (40.8%). It is found that code switching gives impact to the abilities of involved languages in conversations.

Another research had been conducted by Novianti (2013). The study involved the students of English Education Department who had already signed up as Twitter users as the respondents. To identify code switching types in the tweets, Poplack's framework (1980) was applied. The results show that there are three types of code

switching, seven language combinations and six reasons of the use of code switching in Twitter. In terms of the type, intra-sentential switching tends to be the most frequent type of code switching (56.67%).

For justification, there were two points that distinguishes this research with those previous researches. Firstly, this research intended to find out the communication strategies that were used by students of mathematic study program at University of Lampung. Meanwhile, the previous researches discussed about the communication strategies that was used by Senior High School students and ELT learners. Secondly, this research was tried to find out when code switch that was occur during the presentation and the meaning of code switching that had been done by mathematic students at University of Lampung. Meanwhile, the previous research discussed about code switching used in conversations by an American student of the *Darmasiswa* program and the use of code-switching on twitter by English Department students.

Regarding all of the statement above, the researcher would like to focus her research on communication strategies and code switch that were used by fresh college learners of mathematic study program. Therefore, this study was entitled "*Analysis of Students' Communication Strategies in the ESP Class of Mathematic Study Program at University of Lampung*"

METHOD

This research was non-experimental descriptive study. The researcher used taxonomic analysis as qualitative design. The researcher analyzed types of the communication strategies adapted from Dornyei's taxonomy (1995).

Communication strategies that occurred in the presentation session was classified by using Dornyei's Taxonomy, meanwhile code switching that occurred in the presentation session was classified by using Poplack theory (1984). Besides, in analyzing the factors of code switch, the researcher used Bista result research (2010). In collecting the data, the researcher used observation sheet as the instrument.

Subjects in this study were 20 fresh college learners of mathematic study program in A class at University of Lampung. This research conducted in the individual presentation session. So that, they could shared what they were thinking about the topic of the presentation. The instrument used in this research was observation sheet. The explanation of the observation sheet task is as follow:

Observation Sheet: This research used observation sheets to analyze the data. Observation sheets were divided into two, they were observation sheet for analyzing communication strategies and observation sheet to process the code switching data that occur in the presentation session.

The researcher did the qualitative description in analyzing the data from the observation sheet which was about CSs and code switching that was conducted to probe their perceptions of communication strategies and the use of certain strategies when communicating with others. The researcher also analyzed code switching to find out when the code switch happened and the meaning of code switching that was used by the mathematic students. It means that the researcher would describe all collected data and problems found in the field and referring to the previous research about CSs and code switching mentioned in the second chapter.

RESULTS AND DISCUSSION

Result

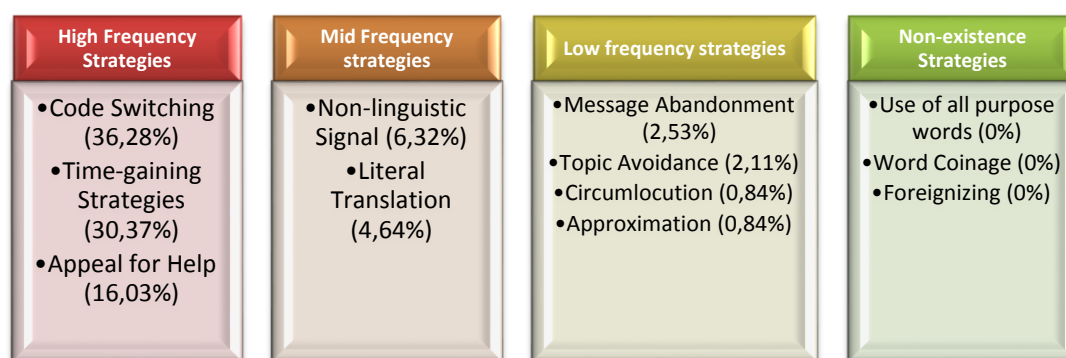
The data of this research was taken from the presentation session in ESP class. The data was in the form of communication strategies applied by the participants in the presentation session. The participants were 20 students from 1st year mathematic students. From the question and answer session in presentation, it was found that there were 237 communication strategies used by all participants. They were message abandonment, topic avoidance, approximation, circumlocution, nonlinguistic signals, code switching, literal translation, appeal for help, and time gaining strategy. Based on the Poplack's theory (1984), there are three types of code switching that occurred in the presentation session. They are inter-sentential switching, intra-sentential switching, and tag switching. The type of code switching that was most frequently used by the students is inter-sentential switching. Based on the Bista research (2010) there were 9 factors of code switch. Code switching that the students used in this research was because of 4 factors, they were word, phrase, avoid misunderstanding, and easier to communicate.

Total Numbers of Communication Strategies used by mathematic students

Communication strategies	Numbers of Use	
	Σ	%
Message Abandonment	6	2,53
Topic Avoidance	5	2,11
Circumlocution	2	0,84
Approximation	2	0,84
Use of all purpose words	0	0
Word Coinage	0	0
Non-linguistic signal	15	6,32
Literal Translation	11	4,64
Foreignizing	0	0
Code Switching	86	36,28
Appeal for help	38	16,03
Time-gaining strategies	72	30,37
Total	237	100

Based on the data above, the researcher divided the communication strategies that were used by mathematic students into four level frequency, they were high frequency strategies, mid frequency strategies, low frequency strategies, and non-existence strategies. The strategies that included of each level could be seen from the figure bellow:

Level of Communication Strategies Used by Mathematic Students



Qualitative Analysis of Code Switching used by Mathematic Students

Total Numbers of Code Switching used by mathematic students

Types of Code Switching	Numbers of Use	
	Σ	%
Inter-sentential switching	44	51,16
intra-sentential switching	36	41,86
Tag Switching	6	6,98
Total	86	100

Based on the Poplack's theory there were 3 types of code switching; *inter-sentential switching*, *intra-sentential switching* and, *tag switching*. From eighty six utterances that was done by mathematic students, the most frequent type of code switching used by students in presentation session was Inter-sentential switching (51,16%). Then, intra-sentential switching was in the second place with the percentage (41,86%). The last was tag switching with the percentage (6,98%). Moreover based on the observation of the data, the students used L1 word with L1

pronunciation while speaking in L2. It was done because they have difficulties to explain about the content to the audience. In Bista research (2010) there were 9 factors of code switching. From the result of this research, it could be assumed that they used code switching because of four factors, they are word, phrase, avoid misunderstanding, and easier to communicate.

Discussion

From the result of the communication strategies used by mathematic study program in presentation session of ESP class was there were 237 communication strategies that was used in the presentation session. Communication strategy that was most frequently used was code switching, time-gaining strategies, and appeal for help. Those strategies included in high frequency strategies. The example of code switching used by mathematic students could be seen as follow:

Example 12:

DA : at first need to take a plant leaves. It's a *leavesnya.. daunnya direbus. Putri malunya hehe*. Take plants of putri malu, then buil of tritenn to.. 30 sampai 60 gram leaves of plant putri malu.

Example 13:

F : should? *Seharusnya?* Emmm... we must to know emmm because eemm.. chemistry is ... emm... harmful.. we different his hand illustrate the different by making it looks like stairs) emmm... *apaan sih .. supaya.. supaya apa sih?* (looking to other friends).

F : Language Indonesia? (looking to Mr. Hery). *Itu supaya kita bisa membedakan kelebihan dan kekurangannya gitu.. jadi kalo kelebihan itu apa, kekurangan itu apa. Dan kimia itu kan berbahaya gitu lho, jadi agar kita supaya tahu .. gitu. Bagaimana cara menanggulangi, iya, dari dampak kimia itu. Any question again?*

Based on the data above the use of “leavesnya” and “apaan sih” were included in unconcious process. That was happen because of the speaker habit in first language. The speaker used that words because they usualy used that in the first

language. In the example 12, the phrase “*daunnya direbus*” means that the speaker did not know about phrase “*daunnya direbus*” in English. So that, the speaker prefer to use L1 in explaining the leaves was boiled. That was happen also because the students did not know the words that they should use in English. Then, in the example 13 the researcher assumed that in the last dialogue of example 13, the speaker used code switching conciously because he avoid misunderstanding in his explanation, so he prefer use *Bahasa Indonesia* to avoid misunderstanding. He also used *Bahasa Indonesia* because it was easier to him to communicate with his friends during the presentation session. The research findings had indicated that one of the major factors of code switching was that elements of the other language convey the meaning of the intended idea more accurately (Gumperz, 2004). From that statement, it could be concluded that code swtiching was done to get more accurate conversation. If it was compared with the result of the participants here which were mathematic students, there was consideration that the participants were not only wanted to get accurate idea, but also they wanted to get the ease in delivery their ideas.

Based on the result of data from this research, the researcher found that Inter-sentential switching occurred 44 times (51,16%), Intra-sentential switching occurred 36 times (41,86%), and tag switching occurred 6 times (6,98%).

The example of inter-sentential switching could be seen from utterance below;

Example 18

IR : Soap in water there is foam because eemm foam substrate from that is from biotechnic many gas bubble in a liquid or solid, the oposite of forming occur the bubble relation between last in the air alkaline sulfur. *Jadi itu tuh tergantung sama sul.. sulfat ya... jadi busa itu, jadi sabun itu berasal dari sulfat, nah sulfatnya itu yang bisa menghasilkan busa. Ok?*

The speaker used English as the base language in the first sentence. Then, she used Bahasa Indonesia in the next sentence. Thus, this utterance was classified into *inter-sentential switching*.

The example of this type could be seen from utterance below:

Example 19

F : should? *Seharusnya?* Emmm... we must to know emmm because emm.. chemistry is ... emm... harmful.. we different (his hand illustrate the different by making it looks like stairs) emmm... *apaan sih .. supaya.. supaya apa sih?*

The speaker inserted *Bahasa Indonesia* in the middle and the end of her English sentence. Thus, this utterance was classified into *intra-sentential switching*.

Poplack (1984) states that intra-sentential switching is the most complex type of code switching, it is requiring that the speaker be able to control two linguistic systems simultaneously. This research was in line with Poplack's statement. The students prefer use inter-sentential switching to intra-sentential switching because they were not able to control two linguistic systems simultaneously. They prefer to explain with English then continued by using *Bahasa Indonesia* because they were not mastering English well. They did not know how to control two linguistics systems.

The least frequent type of code switching used in the tweets was *tag switching* (6,98%). It can be seen from utterance that FAP said.

Example 20

FAP : okay, I think enough. Thanks for your attention, byeee. Loh??

The speaker inserted an Indonesian tag, *Loh*, into English sentence. Thus, this utterance was classified into *tag switching*.

Based on the data of this research, the researcher found that there were four reasons why the students use code switching in their presentation session.

Code switching that the students used could be seen as follows:

Example 21

- AS : No, because hmmm ebola virus which attack the body different system similar with HIV virus ... eeeee *terus nyampe sekarang itu belum ada ininya loh apa obat atau vaksin yang bisa menyembuhkan ebola itu. Jadi kalo udah terkena ebola, itu kayak udah terjangkit ini.. udah kayak kena HIV. Jadi untuk... Nihhh* (pointing to the slide) ebola disease in the most deathly disease in the world because... with life impact with opportunity to live (life)
- M : chemical process? I think it's different situation. If we don't have a refrigerator like a *anak kos gitu* hehe want to make ice, I think it's better than the refrigerator.
- RRC : *Acne itu menyerang folikel-folikel lembut, that are vulnerable and most often form in the area of the face, neck, and upper trunk. Folikel rambut itu dia rentan berada di face, neck, and upper trunk. Iya, tapi itu kan tipis kulitnya , the skin is very... apa itu namanya?*
- F : Language Indonesia? (looking to Mr. Hery). *Itu supaya kita bisa membedakan kelebihan dan kekurangannya gitu.. jadi kalo kelebihan itu apa, kekurangan itu apa. Dan kimia itu kan berbahaya gitu lho, jadi agar kita supaya tahu .. gitu. Any question again?*

Code-Switching refers to ways to use a L1 word with L1 pronunciation while speaking in L2. Hoffman (1991:113) explained that code switching can occur quite frequently in an informal conversation among people who are familiar and have a shared educational, ethnic, and socio-economic background. It is avoided in a formal speech situation among people especially to those who have little in common factors in terms of social status, language loyalty, and formality. This statement was different from the result of this research. This research was conducted in the formal situation, but the students prefer use code switching to other communication strategies. The researcher assumed that this happens because the students are afraid to make a mistake in their explanation and they also avoid misunderstanding during the explanation process, so they prefer use code switching which used *Bahasa Indonesia* when they faced some difficulties.

Example 21 was the example of dialogue that consists of code switching that was done by mathematic students. Firstly, the students had difficulties to find the word in L2. It could be seen at this sentence “*like a anak kos gitu hehe*”. The students did not know about the English term of *anak kos*, so she prefer to use L1 to explain it to the audience. Secondly, the students did not know how to made phrase in English, they might be know the words but they had difficulties when they had to stringing words into a sentence. It could be seen from the utterance that was said by AS. The speaker explained about ebola, but in the middle of his explanation he had some difficulties. After took time to thinking, finally he decided to change his explanation into *Bahasa Indonesia* (L1). Thirdly, the students used code switching because they avoid misunderstanding during their explanation. This factor of code switching could be seen by RRC monologue. The speaker had explained by using English, but at the end of his explanation he found little difficulties. Then, he explained it by using L1, because he afraid that the audience did not understand well of his explanation. The last factor of students prefer to use code switching was easier to communicate. This factor could be seen in F monologue. The speaker always tried to explain by using English, but the speaker took time to make a phrase in English. The speaker also looked confused when he had to make a phrase in English. Finally, he gave up and asking for having an explanation in *Bahasa Indonesia*. It was because *Bahasa Indonesia* was easier to communicate which was L1 for him.

So, based on the explanation above it can be conclude that code switching is caused by 4 factors, they are word, phrase, avoid misunderstanding, and easier to communicate. Novianti (2013) states that the learners use code switching because

of the lack of vocabulary so that they used another language to express things. The statement was in line with this research. Generally, the students prefer used code switching to other communication strategies because they are incompetence in L2. They were lack of vocabularies in English

Conclusions

1. There were nine CSs used by mathematic students at University of Lampung. The strategies divided into four levels, they were high frequency strategies, mid frequency strategies, low frequency strategies, and non-existence strategies. High frequency strategies were code switching (36,28%), time gaining strategies (30,37%), and appeal for help (16,03%). Mid frequency strategies were non-linguistic signal (6,32%) and Literal translation (4,645). Low frequency strategies were message abandonment (2,53%), topic avoidance (2,11%), circumlocution (0,84%), and approximation (0,84%). Non-existence strategies were use of all purpose words, word coinage, and foreignizing.
2. In addition, code switching was the most frequently used strategy during presentation session. Based on the Poplack's theory there were 3 types of code switching; *inter-sentential switching*, *intra-sentential switching* and, *tag switching*. From eighty six utterances that was done by mathematic students, the most frequent type of code switching used by students in presentation session was Inter-sentential switching (51,16%).

3. Based on the result, it could be conclude that code switching was caused by 4 factors, they are word, phrase, avoid misunderstanding, and easier to communicate.

Suggestion

1. Students in Indonesia might not aware about CSs. It would be better for lecturers or teachers to introduce and train them since CSs are helpful to improve students' speaking performance.
2. From this study, it is proven that CS could be done even in subject-matter classes where English is the low of communication. Teacher may use presentation session if they want to train nine types of communication strategies that occur during the observation of the study. They may use different models of learning if they want to train other types of CS.
3. This study investigated the use of CSs in ESP class by using presentation session. Future research can try to focus investigating the use of CSs in other activity. Therefore, the results will be different from this research.
4. This study has subjects from the same level of study. It could be a good idea if further research can investigate the difference of CSs use in different level of study but using the same model of learning.

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