



CODE SWITCHING AND CODE MIXING IN BILINGUAL CLASSROOM INTERACTION

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Abstract

There are several international schools or even semi-international schools that utilize foreign language, especially the youth who has mastered their mother tongue sometimes (if not often) do code switch and/or code mix language to English alternately or in other words they change language occurring over sentences. The objective of this research was to find out code mixing and switching in terms of teacher talk and student talk used in the classroom interaction. The method of this research was qualitative quantitative and it applied discourse analysis approach. The subject of this research was the teacher and the students of Junior High School Number 12 Makassar. The researcher chose Biology teacher and took three classes. The instruments of the research were observation checklist, interview, recording, and questionnaire. The researcher found that the type token ratio in code mixing and code switching Indonesian/English in classroom interaction was varied. The average mean length of utterance of the teacher in code mixing and code switching Indonesian/English in the three classes were 11.77 in class VIIA, 11.23 in class VIIC, and 10.22 in class VIID. There were two types of questions the teacher asked in code mixing and code switching the words in the classroom namely convergent and divergent questions. The teacher provided interactional feedback in code mixing and code switching to her students when addressing students in the classroom.

Keywords: Code Mixing, Code Switching, Teacher Talk, Student Talk

INTRODUCTION

As a communication strategy, code switching and code mixing are the various forms that is chosen and employed by speakers to deliver their intentional meanings. This preference of choice is actually the reflection of the speakers' strategy in achieving certain interactional effects during their interaction which is, of course, colored with various different motivation. Recently, code switching has again attracted a considerable amount of attention. It has become an interesting phenomenon to study in particular the usage of language in society because it is part of the development processes and the use of multiple languages (i.e. bilingualism and multilingualism). Code switching is a widespread phenomenon that extends from daily life and workplaces to classrooms in which specific languages have been instituted as the official languages of instruction. Code switching is used by people who are bilingual and multilingual (Wardhaugh, 2006).

In the classroom interaction, language users in conversation very often are bilingual in as much as, in addition, to use the sign language of their community, they also learn and use the

spoken language of the surrounding community. When bilingual users communicate with each other, they typically mix and switch their languages, that is, they use elements or structures from their two languages. Mixing and switching is the result of the influence of sociolinguistic factors such as the interlocutor, the situational context, and the choice of languages can be a conscious or unconscious process. Code switching and code mixing among some language are natural as the impact of language and cultural relationship. Communicating some mother or other language other than target one does not necessarily keep out the students from social or community of students learning English but rather, they signify or give a cue of urges to be accepted in the community. Several cues like identity, equality, and mutual respect were taken place during cross cultural communication. Multiform codes-mixing and switching found in the normal classroom show the existence of self-identity which is the characteristics of the local people where the students come from (Kustati, 2014, p. 179).

Nowadays there are many teachers who master more than one language namely their native language and the second language. However, in everyday life we speak for many of reasons but some of these reasons are to relate to each other as a person, while others have to do with exchanging information or seeking a practical outcome. Furthermore, Ansar (2017) found several reasons in doing code switching and code mixing in the class, they are: to convey teacher's attitude, talking about particular topic, quoting somebody else, being emphatic about something, inserting sentence fillers or sentence connectors, repetition used for clarification, expressing group identity, showing respect, etc.

Code mixing and switching in classroom interaction particularly teacher talk and student talk are increasingly topical and important field to be researched today because most of teachers and students use two languages or more face to face in the classroom interaction. It is the crucial one and many researchers have done a research about mixing and switching but they put it in observing the classroom interaction related to the reasons and types the teacher switch, the research are very little addressing code switching in teacher talk such the formal and interactional features and the student talk such us response to questions and asking questions.

Therefore, this research brings together contributions from a wide variety of sociolinguistic settings in which this phenomenon is observed in classroom interaction. It was

aimed to find out code mixing and switching in terms of teacher talk and student talk used in the classroom interaction. The aims related to teacher talk are as follows:

1. The type-token ratio in code mixing and switching the teachers' speech when addressing students in the classroom interaction.
2. The mean length of utterances in code mixing and switching the teachers' speech when addressing students in the classroom interaction.
3. Types of questions the teacher asks in code mixing and switching in the classroom interaction.
4. Types of feedback and correction the teacher provides in code mixing and switching in the classroom interaction.
5. The reason of teacher in code mixing and switching words in classroom interaction.

The aims related to students talk and students' cognitive process are as follows:

1. The types of responses to question the students provide in code mixing and switching in the classroom interaction.
2. The types of questions the students ask in code mixing and switching in the classroom interaction
3. The students' preference towards the use of code mixing and code switching in the students learning achievement.

RESEARCH METHOD

The method of this research was qualitative quantitative method. In terms of the approach, the researcher used discourse analysis. This was concerned with the description and analysis of spoken interaction.

The subject of this research was the teacher and the students of Junior High School Number 12 Makassar. For teacher, the researchers chose Biology teacher. For students, the researchers took three classes namely VIII1, VII.3 and VII.5. The instruments of the research were observation checklist, interview, recording by Sony video, and questionnaire. The observation checklist was aimed at finding out code mixing and switching in the features of teacher talk and student talk. Recorder was used to identify code mixing and switching in the formal and interactional features of teacher talk which occur while identify the student's response to question and ask question. The interview was aimed at knowing and getting information from the teacher such us why teachers used code mixing and switched their speech as addition.

FINDINGS

1. Teachers' Speech

a. The formal features

1) The type token ratio in the teachers' speech when explaining materials with mix and switch the language Indonesian English and English Indonesian to the students in the classroom interaction.

Having transcribed the teachers' speech in the classroom, the researchers used Antconc Software to calculate the number of different words as well as the total number of words in the teachers' speech. The total number of different words (type) was then divided by the total number of words (token) to obtain the result of type-token ratio in the teachers' speech when explaining materials with mix and switch the language Indonesian English and English Indonesian to the students in the classroom interaction. The results of calculation showed that the teacher has different type token ratio in each class namely class VIIA, class VIIC, and VIID. It is shown in Table 1 below:

Table 1. Type-token ratio

Observation	Type-token ratio		
	VIIA	VIIC	VIID
Explanation of the teacher in mixing and switching language.	Types: 81	Types: 95	Types: 58
	Token:106	Token: 146	Token: 92
	Ratio: 0.764	Ratio: 0.650	Ratio: 0.630

Table 1 shows that the total number of different words (types) of the teacher's explanation in mixing and switching language at class VIIA is 81, the total number of words (token) of the teacher's explanation in mixing and switching language at class VIIA is 106, and the ratio is 0.764. Different in class VIIC, the total number of different words (types) of the teacher's explanation in mixing and switching language is 95, the total number of words (token) of the teacher's explanation in mixing and switching language is 146, and the ratio is 0.650, and class VIID, the total number of different words (types) of the teacher's explanation in mixing and switching language is 58, the total number of words (token) of the teacher's explanation in mixing and switching language is 92, and the ratio is 0.630. The average of the type token ratio of the teacher's

speech in three classes ≥ 0.59 . It can be proved that all three classes have different type token ratio and the variety of vocabulary is regarded varied.

2) The mean length of utterance in the teachers' speech when explaining materials with mix and switch the language Indonesian English and English Indonesian to the students in the classroom interaction.

To find out the mean length of utterance of the teacher's speech when explaining materials with mix and switch the language Indonesian English and English Indonesian to the students in the classroom interaction, the researchers calculated the mean length of Indonesian utterance first, English is second, and third is Indonesian/English utterance. It was used as a measure of sentences level complexity. It was calculated by dividing the total number words of Indonesian, English, and Indonesian/English with the total utterance of the three languages in the all classes. The results of complexity were presented in table below:

Table 2. Mean Length of Indonesian Utterance

Observation	Type-token ratio		
	VIIA (wpu)	VIIC (wpu)	VIID (wpu)
Explanation of the teacher in Indonesian language.	Token: 20 Total Utterance: 8 MLU: 2.5	Token: 5 Total Utterance: 2 MLU: 2.5	Token: 3 Total Utterance: 2 MLU: 1.5

Table 2 shows that the utterances of the teacher when explaining materials with use Indonesian language are similar both VIIA and VIIC. However, the speech of the teacher in class VIIA and VIIC contains longer utterance than the speech of the teacher in class VIID. It is proved by the average mean length of utterance the teacher in class VIIA and VIIC (2.5) which longer than the teacher speech in class VIID (1.5). The mean length of utterance < 9.01 word per utterance (wpu) shows that the speech contained averagely shorter utterance.

Table 3. Mean Length of English Utterance

Observation	Type-token ratio		
	VIIA (wpu)	VIIC (wpu)	VIID (wpu)
Explanation of the	Token: 597	Token: 362	Token: 102

teacher in English language.	Total Utterance: 101 MLU:5.911	Total Utterance: 59 MLU: 6.135	Total Utterance: 20 MLU: 5.1
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Table 3 shows that the utterances of the teacher when explaining materials with use English language are different and was varied in length each class going from the highest mean length of utterance are class VIIC and the lowest is VIID. However, the speech of the teacher in class VIIC contains longer utterance than the speech of the teacher in class VIIA and VIID. It is proved by the average mean length of utterance the teacher in class VIIC (6.135) which longer than the teacher speech in class VIIA (5.911), and VIID (5.1). The mean length of utterance < 9.01 word per utterance (wpu) shows that the speech contained averagely shorter utterance.

Table 4. Mean Length of Indonesian/English Utterance

Observation	Type-token ratio		
	VIIA (wpu)	VIIC (wpu)	VIIE (wpu)
Explanation of the teacher in mixing and switching language.	Token:106 Total Utterance: 9 MLU:11.77	Token: 146 Total Utterance: 13 MLU: 11.23	Token: 92 Total Utterance: 9 MLU: 10.22

Table 4 shows that the utterance of the teacher which is use in three classes was varied in length going from the highest mean length of utterance was class VIIA and the lowest a VIID. However, the speech of the teacher in class VIIA contains longer utterance than the speech of the teacher in class VIIC and VIID. It was proved by the average mean length of utterance the teacher in class VIIA (11.77) which longer than the teacher speech in class VIIC (11.23), and VIID (10.22). The mean length of utterance < 9.01 word per utterance (wpu) showed that the speech contained averagely shorter utterance. On the other hand, the mean length of utterance ≥ 9.01 word per utterance (wpu) or equal with 9.01 word per utterance (wpu) shows that the speech contained averagely longer utterance.

Talking about the mean length of utterance in the teachers' speech, it should be more explanation that in the classroom interaction there are two languages are occurred namely Indonesian and English, while there is a code occurred namely Indonesian/English and they has

relation with the speaking function of the teacher speech in the classroom interaction. According to Brown (1983), there are three important points the function of speaking namely talk as interaction, transaction, and performance. Here, the function of speaking in the classroom interaction mostly talk as interaction and transaction. Talk as interaction for example opening/closing materials and choosing the topic, while talk as transaction for example explaining, describing, asking, confirming, and clarifying about materials.

The language use of the teacher related to the function of speaking in each class present mostly utterance in English used by the teacher in terms of opening/closing materials, persuading, and rewarding students for example “you can write down or consider about the text”. In Indonesian language mostly used in interrupting and reacting for example “tidak..tidak”. While Indonesian/English code mixing and code switching used in explaining the materials and defining content that is difficult to be understood by the students for example “mention semua bahan2 yang menyebabkan soil pollution, water, and air pollution”.

b. The interactional features

1) The types of questions asked by the teacher in the classroom interaction.

Having transcribed the teachers’ speech in the classroom, it was found out that there were three types of questions used by the teacher in the three classes. The questions are procedural, convergent, and divergent questions.

Table 5. Teachers’ Question

Question	Class VIIA	Class VIIC	Class VII
Procedural Question	-	-	-
Convergent Question	1	-	-
Divergent Question	3	3	2

Table 5 shows that the teacher mostly used rhetorical question to the students in learning. Clearly, the teacher mix and switch the words if she asked about the high level of material that the students difficult to understand. Even though the teacher gave routine question but she did not need to mix and switch the words. The example of rhetorical question, convergent question and routine question which has done by the teacher in classroom would be presented below:

Divergent questions:

- “Tulis kemudian jelaskan opini kalian tentang tiap-tiap topik about environment.”
 (Indonesian/English code mixing)

(Write and elaborate your topic about environment)

- “Why *gatal2, terganggu, panas, and sesak nafas?*” (Indonesian/English code mixing)
(Why do irritation, disturbing, hot, and out of breath?)
- “Why do you feel *tidak nyaman?*” (Indonesian/English code switching)
(Why do you feel uncomfortable?)
- “Mention *semua bahan2 yang menyebabkan* soil pollution, water, and air pollution?” (Indonesian/English code mixing)
(Mention all substance which can cause soil pollution, water, and air pollution?)
- “*Jelaskan tentang* environment *di depan kelas!*” (Indonesian/English code mixing)
(Please elaborate the definition of environment in front of your class!)
- “*Kalau plastik kira kira bisa terurai oleh tanah* or not? Who can answer please raise your hand?” (Indonesian/English code mixing)
- *(Can plastics be decomposed by the soil or not? Who can answer? Please, raise your hand)*

Convergent question:

- “*Kalau plastik kira kira bisa terurai oleh tanah* or not?” (Indonesian/English code mixing)
(can plastics be decomposed by the soil or not?)

2) The types of feedback and correction provided by the teacher in the classroom interaction

The types of feedback and correction provided by the teacher in the classroom interaction have done in the three classes, the example will be given below:

The types of feedback:

- “*Apa you? ya good!*” (Indonesian/English code switching)

(What do you say? Yeah good!)

- “*Terganggu, Ok.*” (Indonesian/English code switching)

(Disturbed, Ok)

“*Gatal2, can be*” (Indonesian/English code switching)

“*Irritation can be*”

The types of correction

- “*If I do seperti itu, in my opinion the animal will lose their food.*” (Indonesian/English code mixing)

(If I do like that, in my opinion the animals will lose their food.)

- “To safe from water pollution *seperti* don’t throw garbage in everywhere.”
(Indonesian/English code mixing)
(*To safe from water pollution, for example, do not throw garbage everywhere*)
- “*Artinya*, may be someday *akan terjadi bencana alam* because mineral *sudah berbau* with the water in the sea, so the fish can die.” (Indonesian/English code mixing)
(*It means that, maybe someday there will be occurred natural disaster because mineral has decomposed with the water in the sea, so the fish can die*)
- “Give punishment means *memberikan hukuman*.” (Indonesian/English code switching)
(*Give punishment means giving punishment*)
- “You can say give punishment to the people with *melanggar* this rules.” (Indonesian/English code mixing)
(*You can say give punishment to the people who break the law*)
- “Makes rules means *buat aturan yang akan memberikan dampak lingkungan yang bagus* because the people will *takut untuk membuat pelanggaran*.” (Indonesian/English code mixing)
(*Making rules means someone should make rules that can give a good impact for our environment because the people will be scared in breaking the law*)
- “*Mengurangi* decrease.” (Indonesian/English code switching)
(*Decrease*)

3) The Reason for the Teacher to Use Code Mixing and Code Switching in Learning Process.

In order to find out the reason why the teacher mixed and switched her language in learning process. The researchers used structured interview. It means that the researchers established the questions before interviewing the teacher. The result of interview pointed out three reasons of the teacher in mixing and switching the code in the classroom interaction namely to give clear explanation to the students in terms of difficult words (technical terms), to make the students easy to understand, and make the teacher and the students close to each other. Besides, the use of code mixing and code switching in learning give good indication for students such us increase the students confidence in speak English, the students get comprehensible input, it is go in line with the hypothesis of Krashen $i + 1$. (Krashen, 1985).

Clearly, even though in bilingual class is demanded to use English in science, but in explaining materials the teacher need mix and switch the language in order to give a clear explanation in many items which are talk about the terminology of the lesson that very difficult to be learned by the student in the classroom interaction. Besides, the students feel enjoy if the

teacher mix and switch the words in learning, so the students merely give response directly to the teacher related to the topic.

2. Students' Speech

a. The Students' Response to Questions

Talking about the students' response to question in Junior High School Number 12 Makassar, based on the transcription the response of the students covered responses to referential questions; confirmation checks and clarification requests (Brock, 1986). The example of responses occurred in the three classes will be presented below:

- Class VIIA

In the first class, there were two students' responded to the question but it was occurred in the role of students such as students to students (S-S) when they are discussing about the topic which are given by the teacher. The example below:

➤ "I will give suggestion to her or him and *menjelaskan* about *dampak* damage of environment." (Indonesian/English code mixing)

(I will give suggestion to her or him and explain about the damage impact for our environment)

➤ "The animal can't live if there are no trees because it is *sangat diperlukan untuk kehidupan*." (Indonesian/English code switching)

(The animals can't live if there are no trees because they are very necessary for our live)

➤ "In my opinion *hal itu* not good for us" (Indonesian/English code mixing)

(In my opinion, it is not good for us)

➤ "*Saya akan menjelaskan* about the activity *seperti merokok, menebang pohon, transportasi yang mengakibatkan* air pollution." (Indonesian/English code mixing)

(I will explain about the activity for example smoking, cut the trees, and transportation that caused air pollution).

- Class VIIC

The role of students in the class VIIC is different in the first class. Clearly, in this class, there were many students' responses occurring either students to students (S-S), or students to teacher (S-T). The example given below:

➤ "Mom, *yang ini* environment." (Indonesian/English code mixing)

(Mom, this is environment)

➤ "I have *flu*." (Indonesian/English code switching)

(I get a cold)

➤ “Mom *nda ada gambarnya*, mom.” (Indonesian/English code mixing)

(Mom, there is no picture, mom)

➤ “No *groupku* mom.” (Indonesian/English code mixing)

(I don’t have a group mom)

➤ “*Mengurangi* minimize.” (Indonesian/English code switching)

(Decreasing, minimize)

➤ “*Jawaban kami adalah* don’t put garbage in everywhere and in the river.”

(Indonesian/English code switching)

(Our answer is don’t put garbage everywhere and in the river)

➤ “Give punishment *bagi yang melanggar*.” (Indonesian/English code switching)

(Give punishment to the people who break the law)

➤ “Mom, *finishmi*, mom.” (Indonesian/English code mixing)

(Mom, I have finished, mom)

➤ “After saw that film, Can you offer some solution that can solve the problem?

If yes, please mention and explain it. If no, please explain why. Yes, after saw that film, we can solve the problem and *mengurangi pollution*.” (Indonesian/English code mixing)

(After you saw that film, Can you offer some solution that can solve the problem? If yes, please mention and explain it. If no, please explain why. Yes, after seeing that film, we can solve the problem and decrease the pollution.)

➤ “After saw that film, Can you give some cause effect of air pollution?

If yes, please mention and explain it. If no, please explain. Yes after see the film because effect of air pollution is smoke, makes *asma*.” (Indonesian/English code switching)

(After you saw that film, Can you give some cause effect of air pollution? If yes, please mention and explain it. If no, please explain. Yes after see the film because effect of air pollution is smoke, makes *asthma*)

- Class VIID

The role of students in the class VIID is similar in the class VIIC. Clearly, in this class, there are students’ responses occur either students to students (S-S), or students to teacher (S-T).

The examples were given below:

➤ “The government have implementing *trus...*” (Indonesian/English code switching)

(The government has implemented then...)

- “To save our environment *ehm* mineral in land, and *apa sich* and # fertilizer, do not trhow the plastic yang tidak dapat dicerna eh diuraikan oleh alam.” (Indonesian/English code mixing)

(To safe our environment, mineral in land, and what’s and # fertilizer, do not throw the plastic that cannot be decomposed by nature).

b. The Students Ask Questions

Asking questions of the student is refers to the reason students ask, it may be answered by yes-no question of further information. The question may begin with “*what*” concern with factual matters or “*how and why*” to explore the process and reason. The example of responses occurred in the three classes will be presented below:

- Class VIIA

In the class VIIA, the students ask question much given a questions which are needed answer yes-no questions and referential questions. The example namely:

- “Mom, *apa* Englishnya *gempa bumi* mom?” (Indonesian/English code mixing)

(Mom, what is the English of earthquake, mom?)

- “What is the title... *apa*?” (Indonesian/English code switching)

(What is the title... what?)

- “Earthquake *saya* mom?” (Indonesian/English code mixing)

(My part is earthquake, mom)

- “Mom, *apa* Englishnya *hutan* mom?” (Indonesian/English code mixing)

(Mom, what is the English of forest mom)

- “Mom, *apa maksudnya ini* mom?” (Indonesian/English code mixing)

(Mom, what is the meaning of this mom)

- “What the solution for the # *apa*# land pollution?” (Indonesian/English code mixing)

(What is the solution for the #what# land pollution)

- “About film *judulnya kah*?” (Indonesian/English code switching)

(Do you talk about film?)

- Class VIIC

In the class VIIC, the questions occur was similar with class VIIA. Here, the students asked question much given a questions which are needed answer yes-no questions and

referential questions. The example namely:

➤ “*Apa Englishnya sesak nafas, mom?*” (Indonesian/English code switching)

(What is the English of out of breath, mom?)

➤ “*Diputar ini, mom?*” (Indonesian/English code switching)

(Is it recorded, mom?)

➤ “*Yang mana, mom?*” (Indonesian/English code switching)

(Which one, mom?)

➤ “*Apa judulnya, mom?*” (Indonesian/English code switching)

(What is the title, mom?)

➤ “*Apa Englishnya mom asap pabrik.*” (Indonesian/English code mixing)

(What is the English of smoke factory, mom?)

➤ “*Apa Englishnya bau menyengat mom?*” (Indonesian/English code mixing)

(What is the English of stink, mom)

➤ “*Dicopyki ini semuanya?*” (Indonesian/English code switching)

(Are all of these copied?)

➤ “*Apa mengurangi dalam bahasa English?*” (Indonesian/English code switching)

(What is decrease in English?)

➤ “*Can you explain what we do to menghindari pollution?*” (Indonesian/English code mixing)

(Can you explain what we do to avoid pollution?)

- Class VIID

In the class VIID, the questions of students occur in two kinds of questions namely the question that only answers yes-no questions and referential questions. Te example given below:

➤ “*What we do so the forest can’t flood eeh apa yang kita lakukan agar kerusakan hutan tidak menyebabkan banjir?*” (Indonesian/English code switching)

(What we do so the forest cannot flood eh, what are we doing to avoid the damage of forest and the flood cannot occur)

➤ “*How to make a clean water apa..?*” (Indonesian/English code switching)

(How to make clean water what..?)

Teachers' speech and the students' speech are two elements that cannot be separated to each other. Clearly, in the classroom interaction there is always interaction both the teacher and the students in learning. The teachers' speech and the students' preference are very close to each other. The varied vocabularies in explaining material causes the students good score.

c. The Students' Preference towards the Use of Code Mixing and Switching in the Students Learning Achievement

The questionnaires were made up of two sections, each section was done after the observation finished. They are namely:

- Biographical information

The data concerning home language of the students showed that 69 students were indicated using Indonesian language, 7 students were indicated using both Indonesian and English language as home languages, 2 students were indicated using both Indonesian and Makassar language as home languages, 1 student was indicated using English language as home language, 1 student was indicated using both Indonesian and Java language as home language, and 1 student was indicated using both Indonesian and Chinese language as his home languages. The data collected, therefore, were reliable for the study and the results could be drawn with looking at the students' preference in each classes. There were three classes in this study and all of them have given different views about the use of code mixing and code switching. However, on the question of what language(s) were spoken at school, 7 students indicated that they spoke Indonesian at school, 2 students were indicated using English and 72 students were reported that they spoke both Indonesian and English. Moreover, on the question of what language(s) the biology teacher taught in, 28 students indicated that their teacher taught them in English, there was no student who used Indonesian and 53 students were indicated using both English and Indonesian. Furthermore, on the question of what language(s) the students learnt biology in, 10 students indicated that they learnt biology in English, 10 students were indicated using Indonesian and 61 students were indicated using English and Indonesian. It was clear from this analysis that using code mixing and code switching was relevant to be done in enhancing the students learning achievement. Many students said that they switch Indonesian English in learning to make them easy to understand English lesson and they can pass the exam with good grade point. Investigating Indonesian English code mixing and code switching in these communities, therefore, the researchers can get very useful information that could assist in

planning and policy. The decision which has done by the government in making the international standard school is very crucial and need backing from many sides.

- **Students' Views about Biology**

The students' views about biology were assessed to know the students' preference towards the use of code mixing and code switching in learning achievement by giving Biology Achievement Test (BAT) and questionnaire to know their feeling which consists of 13 questions. The questionnaire comprised a Likert type scale. On each question, students indicated their levels of agreement or disagreement with the given statements related to Biology attitudes. Scores on each question ranges from 1 to 5, with lower values indicating more negative attitudes towards biology. The questionnaire scores could range from 20 to 100, a range of 80 points. A score higher than the midpoint of 37.5 indicated a relatively positive attitude towards biology and score lower than 37.5 indicated a relatively negative attitude. To verify whether there was any significant effect of Indonesian and English code mixing and switching on students' preference towards the use of code mixing and switching in learning achievement.

d. The Mean Score and Standard Deviation of the Students Related to Biology Achievement Test (BAT)

After being calculated the result of the students' on BAT, the mean score and standard deviation are presented in the following table to find out the significant difference between the three classes in taught Biology towards the use of code mixing and code switching in learning achievement.

Table 6. The Mean Score and Standard Deviation of the Students' Preference towards the Use of Code Mixing and Code Switching in Learning Achievement

Class	Mean Score	Standard Deviation
VIIA	81.11	8.91
VIIC	73.70	10.43
VIID	68.52	8.18

Table 6 shows that the class VIIA got the highest mean score of 81.1 rather than two classes, VIIC 73.7 and VIID 68.5. On the basis of this finding the researchers inferred that code mixing and code switching improved the score of the students' in learning Biology. It means that the students' preference towards the use of code mixing and switching in learning achievement particularly learning Biology had positive role in enhancing the students' in learning Biology. It was proven from the result of all classes above, the students got high score. The class VIIA got

the highest type token ratio. This indicated that the Indonesian English and English Indonesian code mixing and code switching in learning achievement had a good positive role on the students' preference.

e. The Mean Score and Standard Deviation of the Students' Related to the Attitude of the Students

After being calculated the result of the students' related to the attitude of the students, the mean score and standard deviation are presented in the following table to find out the significant difference between the three classes in taught Biology towards the use of code mixing and code switching in learning achievement.

Table 7. The Mean Score and Standard Deviation of the Students' Related to the Students' Attitude

Class	Mean Score	Standard Deviation
VIIA	52.30	4.90
VIIC	49.81	4.66
VIID	49.26	5.55

Table 7 shows that the class VIIA got the highest mean score (52.30) and class VIIC got mean score 49.81 and VIID got mean score 49.26. On the basis of this finding, the researchers inferred that code mixing and code switching improved students' attitudes towards Biology. It means that the students' preference towards the use of code mixing and switching in learning achievement particularly learning Biology had positive attitude.

DISCUSSION

The findings show that the average of type token ratio in the speech of teacher in class VIIA in mix and switch Indonesian/English was 0.764, in class VIIC was 0.650, while the average of type token ratio in mix and switch Indonesian/English in class VIID was 0.630. It indicates that the speech of the teacher mix and switch Indonesian/English in class VIIA was more varied than the teachers' speech in VIIC and VIID. However, since the average of type token ratio of the teachers' speech was ≥ 0.59 in the three classes, the speech of the teacher was considered varied.

The mean length of utterance in the teachers' speech when explaining materials with mix and switch the language Indonesian English and English Indonesian to the students in the three classes were different to each other.

The types of questions asked by the teacher in the three classes consist of three types of

questions namely procedural, convergent, and divergent questions. The findings showed that the teacher asks in the class VIIA 1 convergent question and 3 divergent questions in mixing and switching Indonesian/English. Different with the teacher asked in class VIIC and VIID. Both two classes VIIC and VIID have 3 divergent question only, neither procedural question nor convergent question when she explains in mixing and switching Indonesian/English in the classroom interaction.

Talking about the types of feedback and correction by the teacher in the classroom interaction, it reveals in finding that the teacher use feedback and correction in the three classes. There are 3 feedbacks and 7 corrections occurred in the three classes. Mostly the types of feedback are interactional feedback to the students namely expanding or modifying students' answer, indicating an incorrect answers, and comment.

Talking about the students' response to question, the students covered responses to referential questions; confirmation checks and clarification requests. The responses of students were different in each class. In each class, there are two roles of students in response the question namely the role of students to the teacher (S-T) and the role of students to students (S-S) in code mixing and code switching in the classroom interaction.

The students ask question in each class is very different. In the class VIIA, the questions are needed answer yes-no questions, divergent questions and referential questions. The result of interview pointed out three reasons of the teacher in the use of code mixing and code switching in learning particularly in the classroom interaction namely to give clear explanation to the students, to make the students easy to understand, and make the teacher and the students close to each other.

The students' preference towards the use of code mixing and code switching in the students learning achievement consist of two main points namely: the use of code mixing and switching in the classroom interaction enhancing the students' scores in learning Biology and the use of code mixing and switching convince positive attitude and positive role to the students' preference towards the use of code mixing and switching the students in learning achievement.

In ELT classrooms, code switching comes into use either in the teachers' or the students' discourse. Code switching exists in English classrooms and has many code variations (Sert, 2005,

p. 1). The use of code switching usually occurs during foreign language teaching-learning processes especially when studying English based on the different backgrounds and reasons (Yusuf, 2009). To make sure teaching and learning process run smoothly, the teacher used code switch and/or code mix.

This research findings is in line with the findings of Suganda (2012) who found that the main factor why teachers code switch and/or code mix is that they want to have a better communication with their students so that the students can understand their utterance and the students have positive response toward the use of code switching and code mixing.

This research only focused on one teacher, took three classes as sample and applied qualitative and quantitative research with discourse analysis approach. It was different from Fachriyah (2017), Arifin and Husin (2011). Fachriyah conducted a research in a university and took one lecturer and one class as her sample. She used an ethnographic method for study of communication based on Hymes (1996) and was further developed by Saville-Troike (2003) with a pragmatic approach. She found that the use of code-switching in the language instruction has multiple functions that support an effective learning process. These functions include (1) clarification, (2) reiteration or repetition, (3) explanation, (4) asking, (5) translation, (6) checking for understanding, (7) emphasizing a language element, (8) making inferences, (9) developing vocabulary, (10) class discussions of student tasks, (11) giving feedback, (12) aiding memorization, (13) class management and (14) entertainment and general communications. While, Arifin dan Husin took 6 instructors and 163 students as their sample. They researched code switch and code mix of English and Bahasa Malaysia. They stated that the occurrence of CS/CM is largely due to the linguistic competence of the participants in the interactional setting. It is found that instructors' English Language skills are usually not sufficient enough to carry out the task of delivering lectures in that language. Students' English Language skills, too, are not sufficient enough to handle the curriculum. Thus, the linguistic incompetence of both the instructors and students need to be addressed. The findings reveal an urgent need for the instructors to improve their English competence skills.

It has been declared that main motivating factor for the occurrence of code switching and code mixing is lack of English language competence both on the parts of teachers and students. This certainly has a meaningful impact on their English language development abilities. The students' response denoted, the language of teaching can influence the process of learning and gaining knowledge. Thus, there seems to be an important need for the teachers to pay more

attention to the language used in presenting the content of their subject materials to benefit learning.

CONCLUSION

Based on the findings, the researcher concluded: (1) the type token ratio in code mixing and code switching Indonesian/English in classroom interaction was varied, (2) the speech of the teacher in code mixing and code switching Indonesian/English when addressing students in the classroom contained longer utterances, (3) there are two types of questions the teacher asked in code mixing and code switching the words in the classroom namely convergent and divergent questions, (4) there are two roles of students in response the question namely the role of students to the teacher (S-T) and the role of students to students (S-S) in code mixing and code switching in the classroom interaction, (5) there are two types of the students question in code mixing and switching Indonesian/English when asked the teacher namely procedural questions and convergent questions, and (6) the students' preference towards the use of code mixing and code switching in the students learning achievement consist of two main points: the use of code mixing and switching convince positive attitude and positive role to the students preference towards the use of code mixing and switching the students in learning achievement and the use of code mixing and switching in the classroom interaction enhances the students score in learning Biology.

Then, the teachers are recommended to use code mixing and code switching in varied vocabulary since it is a good at enhancing the students' achievement in learning process and the question, feedback, and correction of the teacher in applying codes make the students easy to get comprehensible input in learning achievement. However, a series of development courses on English Language proficiency and communication skills in English could be developed to help these teachers improve their delivery skills in the classroom. Since this research just limited to the use of code mixing and code switching in learning Biology. So, the researchers suggests the other researchers to conduct furthermore research related to the use of code mixing and code switching to the other kinds of the lessons.

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