

CODE SWITCHING AND CODE MIXING OCCURENCES IN MARITIME ENGINEERING TECHNOLOGY COURSES: A CASE STUDY

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ABSTRACT

The purpose of this chapter is to investigate the patterns of Code Switching (CS) and Code Mixing (CM) which occur in Maritime Engineering Technology courses in one of the private technical universities located in Perak. This research involved the conversation analysis of classroom interactions, individual interviews and stimulated recall interviews as the methods of data collection. The first step of the research involved 2-hour video recording lessons taught by two technical lecturers within the framework of their university's Technical Course Syllabus. This was followed by individual interviews with the technical lecturers focusing on their patterns of CS and CM practise during their teaching experience. The last stage involved stimulated recall interviews with the technical lecturers based on the selected extracts from their lessons chosen after an analysis of spoken interaction in their classes. The findings of this study suggest that CS and CM could practically be incorporated into the technical education classrooms since the practise of CS and CM benefited not only the technical students but instructors in the technical field.

Keywords: Code switching, Code mixing, technical classrooms

INTRODUCTION

Technical education is a training which involves the transmission of technical skills to students, while the technical skills are knowledge and abilities required to accomplish mathematical, engineering, scientific or computer-related to duties as well as other specific tasks. During this process, code switching (CS) and code mixing (CM) are used to ensure understanding among the technical students. According to Olcay Sert's (2005) notion, in English Language Teaching (ELT) classrooms, teachers' and students' discourse involves CS and CM that lead to betterment of instruction by eliminating or dominating CS and CM use during the foreign language instructions. This notion suggests that educators and students benefit from the use of CS and CM in their teaching and learning process since CS and CM enhance the conveyance of information and support teachers to justify meanings. Based on this assumption, this study investigates why CS and CM are used as devices to achieve the communicative intents and serve certain functions in Marine Engineering Technology technical classrooms. This particular study takes place in one of the private technical universities located in a suburban area of Perak. It is situated next to 'Selat Dinding' of Lumut in Perak. This private technical university only allows English as the medium of teaching and learning. However, CS and CM are incorporated in the teaching process. Hence, this study aims to explore the patterns of CS and CM, which occur during the teaching process.

LECTURERS' AND STUDENTS' PATTERNS OF CODE SWITCHING AND CODE MIXING IN MARITIME ENGINEERING TECHNOLOGY COURSES.

This section presents results, which is the lecturers' and students' patterns of code switching (CS) and code mixing (CM) in Maritime Engineering Technology courses. Generally, there are two broad patterns revealed in this study, which include direct translation and sequential patterns. Direct translation pattern of CS and CM involves translations of English terms to Malay language (BM). In addition, sequential pattern of CS and CM in Marine Engineering Technology is divided into three categories, which include communicative pattern I, II and III. The first pattern is discussed in Section 4.4.1 whereas the second pattern is discussed in Section 4.4.2.

4.4.1 Direct Translation Pattern

The first pattern of CS and CM in Maritime Engineering Technology courses is direct translation pattern. The occurrence of direct translation pattern of CS and CM revealed itself in terms of translation of relevant vocabulary and phrases to L1 which is BM. As an evidence, in Excerpt 30 presented below, T2 translated the English word 'courtesy' to 'penghormatan' in BM.

T2: When someone goes to somebody's house, he will meet the owner of the house. So the owner of the ship is the Captain. So the pilot will meet the captain. *Courtesy. Penghormatan.* When we go to somebody's house we will meet the tuan rumah right.

S: Yes, yes.

(Excerpt 30)

This direct translation method is used to assure that the technical students are able to grasp the term mentioned. Similarly for the excerpts listed below, T1 and T2 translated the phrases in English to BM to enhance the technical students' comprehension and to avoid misunderstanding. Excerpt 31 below shows that the phrase 'restricted visibility' is translated to '*pandangan terhadap*' in BM.

T2: Do you know what is *restricted visibility*?

S: *Pandangan terhadap*?

(Excerpt 31)

In Excerpt 32, there is a direct translation of the terms 'big, enormous' to the word '*besar*' in BM.

T1: Tapi kalau, let's say barang tu very *big, enormous, besar*, tak muat nak guna Vernier Caliper ni macam mana ha?

(Excerpt 32)

This is indeed in line with the use of direct translation pattern in all the excerpts presented below. In Excerpt 33, the words '*external jaw or outer jaw*' are translated to '*Rahang luar*' in L1 which is BM.

T1: We call the whole thing as Caliper but this one we call it as *outer jaw* ataupun *external jaw*. *Rahang luar*. Ingat *rahang luar*? Guna Vernier Caliper ingat dah *rahang luar*. If this is *outer jaw*, this one is inner jaw.

(Excerpt 33)

In Excerpt 34, the term 'depth' is translated to '*kedalaman*' in BM. This is in line with direct translation pattern in which the term in English is translated directly to BM without further explanation in English.

T1: *Depth probe*. *Depth, kedalaman, probe, p.r.o.b.e.*

(Excerpt 34)

In Excerpt 35 from the transcriptions, the word 'circle' is translated to BM as in '*bulatan*'. In addition, the word 'width' in English is translated to '*lebar*' in BM. Both terms are translated to BM to justify meanings.

T1: Diameter tu we said for *circle, bulatan* ataupun silinder. So, kalau awak punya bentuk petak, kita panggil *width*. *Lebar* dia. So, berapa *lebar* dia?

(Excerpt 35)

In Excerpt 36, the term 'long range' is translated to '*jarak jauh*' in BM. Phrase such as 'ship to shore or shore to ship' is also translated to BM as in '*kapal ke pelabuhan atau pelabuhan ke kapal*'. In this excerpt, T1 directly translated the phrases without justifying them in details using English.

T2: HF is used to communicate from *ship to shore or shore to ship*. Kita menggunakan HF set untuk *berkomunikasi antara kapal ke pelabuhan atau pelabuhan ke kapal*. Second, we also use HF to

communicate *ship to ship*. *Kapal ke kapal* and remember this HF set is used for *long range*. Untuk *jarak jauh*. How long?

(Excerpt 36)

In Excerpt 37, the phrase 'one at one time' is translated to '*satu pada satu masa*'.

T2: It means that *one at one time*. *Satu pada satu masa*.

(Excerpt 37)

In Excerpt 38, the term 'forecastle' is translated to '*bahagian depan kapal*' in BM. The term 'stern' is also translated to BM as in '*bahagian belakang kapal*'.

T2: This is the *forecastle, bahagian depan kapal*, and this is the *stern, bahagian belakang kapal*.

(Excerpt 38)

In Excerpt 39, the phrase 'the ship comprises of many compartments' is translated to BM as in '*Kapal ada banyak ruang*'.

T2: As you are aware, the *ship comprises of many compartments*. *Kapal ada banyak ruang*.

(Excerpt 39)

In Excerpt 40, the term 'sensor' is translated to the word '*pengesan*' in BM.

T2: *Sensor is pengesan* kan? So mengesan pelbagai jenis kemungkinan kan.

(Excerpt 40)

The excerpts listed above are all in line with Centeno Cortes (2004) case study, who investigated 18 learners with different language proficiency levels and its connection to CS. It was discovered that low proficiency learners will use L1 to a greater extent, compared to pupils with better L2 abilities. Perhaps this will result in the lower levels being more included when L1 is used by teachers and pupils, if they do not understand the L2 greatly. The use of direct translation pattern occurs many times in Maritime Engineering Technology technical classrooms as presented from the excerpts listed above. It is clear that, T1 and T2 practise CS and CM in their technical classrooms by applying direct translation method as one of the patterns emerged in this research.

4.4.2 Sequential Pattern

The second pattern of CS and CM in Maritime Engineering Technology courses is the sequential pattern. The sequential pattern is divided into three major categories, which include Communicative Pattern I, II and III. There are also used for the aims of explanation and

comprehension checking among the technical lecturers, T1 and T2.

The goal of practising CS and CM in the technical classrooms is to communicate meaning and co-construct comprehension. The occurrences of CS and CM sequential pattern in this research is based on Auer's (1984) identification of sequential patterns of language choice provided by conversation analysis (CA). Based on the conversation analysis framework, there are three major patterns that emerged in this study, which include Communicative Pattern I, Communicative Pattern II and Communicative Pattern III. The three communicative patterns are discussed in the following sections.

4.4.2.1 Communicative Pattern I

According to this pattern, speaker 1 starts with language A (English) and the rest of the speakers follow the same language. However, at some point during the talk, the speaker switches to language B (BM) and the rest of the conversation flows in the same language. This pattern of conversation can be clearly observed in Excerpt 48 and 49 as stated below.

T1: Now you are going to teach me on how to read from Vernier Caliper. I give you five minutes, to prepare, you can find any tools, equipment, within this workshop, Ok?

S1: Any object?

T1: Any object.

(Excerpt 48)

T1: The one that I point now.

S2: Caliper.

(Excerpt 49)

Based on the excerpt above, T1 instructed in language A (English) and S1 replied in the same language as T1. This excerpt of conversation is in line with Pattern I of Auer's (1984) conversation analysis of sequential pattern that suggests if Speaker 1 is speaking in language A, the rest of the speakers follow the same language as Speaker 1. Similarly in the excerpts presented below, T1 asked question in language B (BM) and the rest of the conversations remained in the same language which is BM.

T1: Apa yang awak faham dengan alatan yang awak pegang sekarang ni.

S2: Kegunaan dia ke?

T1: Tak kisah. Campur pun boleh.

S2: Ini untuk ukur diameter objek. Dari dalam dan luar.

(Excerpt 50)

T1: Primary tu sekolah rendah bang. Sekolah menengah dulu ada belajar, kan?

S1: Ada.

T1: Kalau tak belajar Fizik pun, dalam kemahiran hidup kita ada guna. Betul?

(Excerpt 51)

T1: Pernah tengok dekat kampung, kawan-kawan bapa kita bapa kita ke dia ambil pile nombor tiga dia asah gergaji. Celah-celah mata.

S2: Tak pernah.

T1: Alamak bang dua puluh tahun hidup tak pernah main gergaji. Itula bando sangat. Sebenarnya seronok main kerja-kerja tukang ni bando.

(Excerpt 52)

The three excerpts (Excerpts 50, 51 & 52) above are in line with Pattern I of Auer's (1984) notion of conversation analysis which has been discussed earlier. However, a reverse situation takes place in the two excerpts (53 & 54) below with the same pattern. During these conversations, the technical lecturer 1, T1 initiated the talk in language A (English) and received a question also in language A (English) from the student, S1. The whole conversations remained in the same language (English).

T1: Ok. You got the idea, but I want to know, its name.

S1: Caliper?

T1: We call the whole thing as caliper but this one we call it as outer jaw or external jaw.

(Excerpt 53)

T1: So 4 hours 1 machine 1 task you have to complete.

S2: What kind of task?

T1: You will wait until that time, exam.

S2: Can you give me example?

T1: Ok as an example, I will give you one drawing I cannot call this as a product.

(Excerpt 54)

4.4.2.2 Communicative Pattern II

In the second pattern of CS and CM by Auer (1984), the speaker consistently uses language A (English) but the other speaker uses language B (BM) that builds Pattern II, which is discussed below. An example of this pattern can be observed in Excerpt 55 presented below. During this sequence of conversations, T1 asked a question in English. However, the students S1 and S2 responded in BM. Here, even though T1 uses English to ask the students, they still answer T1's questions in language B (BM) which is different from T1's language (English).

T1: What's this? The one that I point now.

S1: Pengukur luar.

S2: Ukur bahagian luar.

T1: Ok. You got the idea, but I want to know, its name.

S1: Pengapit ukur?

S2: Rahang luar?

T1: We call the whole thing as Caliper but this one we call it as outer jaw or external jaw.

(Excerpt 55)

In addition, T2 also asked question in English and the student replied in Bahasa which is in line with Pattern II. The evidence is stated in Excerpt 56 below:

T2 : What else?
S : Kuantiti haba?

(Excerpt 56)

However, according to Wei (2013), this pattern is conventionally not sustainable for a long time as a result of which, it produces Pattern III which is discussed in the following section below.

4.4.2.3 Communicative Pattern III

This pattern shows that speakers might change codes within a turn, leading to a change of code within a sentence. The reason for this might be related to purposes of the interaction, or the code choice at a particular time might be simply chosen in order to ensure comprehension and the perpetual flow of the conversations. As for instance, in the Excerpt 57 presented below, T1 started his talk using first, language A (English), then switched to language B (BM) within a sentence and continued to provide further explanation for the technical lesson in language B (BM) without a prompt from his students.

T1: Ok as an example, I will give you one drawing I cannot call this as a product *kan ni* testing *je ni*, let's say this is a product that you want to fabricate using milling machine. I will give you a drawing. Katakan from silinder, saya nak awak jadikan dia square. Contoh, daripada bulat, jadikan dia segiempat tepat, guna milling machine. For example jadikan dia bentuk sabun. Sabun buku cap kapak. Tau kan? Nampak dia punya petak ni macam mana kan? Exactly saya nak macam ni. Tapi raw material macam ni, bulat macam ni. Bentuk rod. Bukannya kosong. Hollow. Bentuk rod. Sebenarnya dalam tempoh 1 jam dah boleh siap dah. 2 jam dah siap.

(Excerpt 57)

Excerpt 58 below is in line with Pattern III in which T1 initiated the conversation in language A (English) but used language B (BM) within a sentence. T1 starts to use language B which is BM to ask question to the student, S1 and the student replies first, in English and then BM as in "Yes. Ada". More evidences which are in line with Pattern III are stated below (Excerpts 58, 59 & 60).

T1: So you know you have the ideas, this equipment is called a Vernier Calliper, to refresh what we learn in the primary school dulu, saya nak sebut primary pun dah bukan primary secondary tertiary dah. Primary tu sekolah rendah bang. Sekolah menengah dulu ada belajar, kan?
S1: Yes. Ada.

(Excerpt 58)

T1: Dia boleh ukur, tapi kalau nak buat precision, kita biasanya ada micrometer untuk barang kecil. Kejituan dia ada ditulis di situ kan? Point something. Point zero zero.
S1: Ya. Point zero zero.

(Excerpt 59)

T1: There are various equipment and measurement tools available. Betul? Even if you look at on this table, you can see, you have piles, what is this ha? I think you have seen this before kan?
S1: Sesiku L. Yes?
T1: Sesiku L? So in English kita sebut sebagai L-square.

(Excerpt 60)

Excerpt 61 presented below is in line with Communicative Pattern III in which the technical lecturer started the conversation using both languages, English (A) and BM (B). The student also replied in both languages and this evident that CS and CM occurred in the technical classroom.

T2: Broadcast. Selalu dengarkan?
S : Yes, selalu.

(Excerpt 61)

Indeed, these patterns are the ones which form the basis for the selection of excerpts for the individual interviews and stimulated recall interviews (See Appendix 3 & 4). The excerpts selected are the ones which enlighten the occurrences of CS and CM in Marine Engineering Technology technical classrooms.

CONCLUSION

The findings of this study revealed that there are different patterns of code switching (CS) and code mixing (CM) occurrences in Maritime Engineering Technology technical classrooms. The different patterns of CS and CM, which emerge in the technical instruction suggest that CS and CM are practised not only as a linguistic device in the technical instruction but indeed, as a communicative device which assists the technical lecturers to successfully convey the technical knowledge. The researcher asserts that CS and CM are more than a linguistic matter but have a constant impact on the technical lecturers' interaction in their technical classrooms. The different communicative patterns emerged in the analysis section provide a notion in which related to Auer's (1998) discourse-related function CS and CM in CA approach.

The notion suggests that the choice of language of the first speaker in a conversation in some ways affect the choice of language of the second speaker. As an example in Pattern I, when the first speaker is talking in L2 (English) the second speaker will follow the same language as the first speaker. In Maritime Engineering Technology technical classrooms context, if the lecturer is using English in teaching the technical courses, the

students will follow the same language as the lecturer practises in their conversations. However, the language would somehow change to BM (L1) in order to justify meaning and encourage students' comprehension and this is when CS and CM occur in the technical classrooms. The communicative pattern of CS and CM benefit in encouraging the first speaker which is the technical lecturer to practise English in the technical classrooms which result in the use of the same language by the technical students.

In addition, the direct translation pattern emerged in which the technical lecturers practise direct-translation method in many English words and phrases suggest that, L1 should not be neglected in Maritime Engineering Technology technical classrooms. The use of this pattern in the technical classrooms provides benefit to technical lecturers whom are lacked knowledge in the target language (English). The use of direct translation pattern assists technical lecturers to convey the crucial meaning of the technical terms to their students since the students are proficient users of L1 (BM). Furthermore, this pattern provides an alternative to the technical lecturers to convey meanings to the technical students and it would somehow, save time and encourage active participations from both technical lecturers and their students in the teaching and learning process.

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