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Conversational Code-Switching Among Thai Teenage Multilingual Gamers: A Sequential Analysis

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Abstract—Using the pragmatic approach to code-switching studies, this paper presents a case study of how a group of Thai multilingual teenagers employ code-switching to organise their discourse while gaming. Auer's method of sequential analysis was used to reveal the ways participants used code-switching to negotiate the language for interaction and to organise conversational tasks. Participants were found to have used both participant-related and discourse-related code-switching in their interactions with one another. Analysis of these instances of code-switching suggests that code-switching is used as an additional resource by multilingual teenagers to achieve particular conversation goals in interaction, and that multilingualism is a linguistic and interactive resource that is unique to those that are able to communicate in more than one language.

Index Terms—code-switching, multilingualism, sequential analysis

I. INTRODUCTION

Video games have become one of the most popular hobbies around the world, as evidenced by the rapid growth of the video gaming industry in recent years. In 2019, the video gaming market was at an estimate of 151 billion U.S. dollars and is forecast to reach 256 billion U.S. dollars by 2025 (Dobrilova, 2022). Teenagers nowadays are more likely to enjoy video games as a hobby than ever, and a 2011 survey of 4000 respondents reported that those aged 18 to 25 years old that play video games spend an average of 7.97 hours on gaming activities per week (Clement, 2021). As the video game industry continues to grow, and as more and more children and teenagers take up video gaming as a hobby, the influence that video games have on the people that play them cannot be ignored. However, rather than exploring the developmental or psychological impacts that video games have on the youths that play them, this study is interested in the impacts that they have on gamers' linguistic behaviours and habits, taking particular interest in a multilingual behaviour known as code-switching.

Code-switching refers to the act of alternating language or dialect in an utterance or a conversation. It is a type of communicative strategy or contextualisation cue that serves conversational functions, comparable to the act of changing registers, levels of formality, or expressive intonations in monolingual talk. Video games, as multimodal and multilingual spaces, immerse players in environments where they are exposed to a variety of languages and modes of communication. Whether in the form of games that are not yet translated to the players' native language or online games that match players with people who may not speak the same language that they do, video games, whether directly or indirectly, encourage players to acquire knowledge of a second or additional language that is beyond their native tongue. In their investigation of the language use of two Finnish teens playing a video game in English, Lepp änen and Piirainen-Marsh (2009) argue that bilingual language use is important in gaming, as players need to be able to navigate between their own native language and the language of the video game in order to make sense of the video game and to participate in it. The present study proposes the hypothesis that, while gaming, players are more likely to perform code-switching because they are immersed in, and have adapted to, multilingual environments that often require usage of more than one language. With this in mind, the study aims to demonstrate a case study of the code-switching behaviours of a group of gamers and how code-switching is used as a contextualisation cue in the language repertoire of gamers. The main research question of the study is:

- 1. How do Thai multilingual teenagers employ code-switching to structure their discourse while gaming? In addition to the main research question, two additional minor research questions were constructed. These questions are:
 - 1. What patterns of participant-related code-switching are present in the data?
 - 2. What patterns of discourse-related code-switching are present in the data?

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In order to answer these questions, the study analyses the online voice calls of five Thai teenage multilinguals while they are playing an online video game called *Valorant* together, looking particularly at the code-switching that occurs in their interactions.

II. APPROACH

The present study employs the pragmatic approach to code-switching studies. Particularly, it employs Auer (1984, 1998)'s method of sequential analysis, which puts focus on the sequential development of the interaction and the sequential implicativeness of language choice in the interaction. This approach is based on the theory of contextualisation, which argues that interpretations of utterances do not depend on the context, but that speakers actively signal the contextual backdrop against which the specific utterance is interpreted. Simply put, the context is a product of the participants' joint efforts to establish it, and code-switching, as a contextualisation cue, is one among an array of devices that is used to achieve this goal. As the interaction progresses, the meanings of these contextualisation cues unfold to reveal how they play a role in maintaining the organisational structure of a discourse. When a speaker chooses the language for the organisation of their turn, this choice can influence the subsequent language choices of other speakers in the interaction. The main points of interest for this method of analysis are the ways that participants negotiate the language of their interaction with one another and the way that code-switching is used as a tool for organising discourse. Based on these points of interest, Auer proposes two types of code-switching: participant-related and discourse-related code-switching. Participant-related code-switching deals with how the language for the interaction is negotiated among participants, and how participants accommodate the language competences and preferences of one another in the interaction. Discourse-related code-switching deals with code-switching as a tool for organising conversational tasks such as turn-taking, preference marking, and repair and bracketing of side-sequences. The present study identifies instances of these two types of code-switching in the interactions between the participants and presents code-switching as a contextualisation cue that is unique to multilingual talk.

III. PARTICIPANTS

The present study investigates the interaction between five 18-year-old males. The participants are classmates in the same international school in Thailand, and all speak three languages: English, Thai, and Chinese. Table 1 presents the language levels of the participants as self-reported by the participants themselves. Their names are Chika, Ishigami, Kaguya, Kobachi, and Shirogane.

TABLE 1
INFORMATION ABOUT PARTICIPANTS OF THE STUDY

| Name | Age | Gender | Thai | English | Chinese | Other languages |
|-----------|-----|--------|-------------|----------|--------------|--------------------|
| Chika | 18 | Male | Native-like | Advanced | Native | |
| Ishigami | 18 | Male | Native | Advanced | Intermediate | Beginner in French |
| Kaguya | 18 | Male | Native | Advanced | Intermediate | |
| Kobachi | 18 | Male | Native | Advanced | Intermediate | |
| Shirogane | 18 | Male | Native | Advanced | Intermediate | |

Due to the participants' multilingual abilities, it is expected that English to Thai and Thai to English code-switching will not be the only type of code-switching involved in the data. However, in order to limit the scope of the study, analysis of code-switches found in the data will be limited to the Thai-English language pair.

As this is a case study, participants of the study were selected due to the researcher's access to them and due to their unique status as multilingual gamers. In regard to access to the participants, it is necessary to mention the informant of the study, "Hayasaka," whose role was to provide the researcher with inside knowledge about the participants, information about the video game that the participants were playing during the recording, and to record the conversations between the participants. It is also necessary to emphasise that the informant did not participate in the recordings whatsoever, and his only role was to record the conversations and provide the researcher with information about the participants and the game *Valorant* as a member of the community.

IV. DATA COLLECTION

As mentioned previously, an informant was recruited to record the conversations between the participants. This choice was motivated by the desire to limit the amount of observer's paradox, which is when the presence of an observer affects the observed phenomenon. By having a known member of the participants' community collect data,

there is less risk of the observer's paradox and participants are more likely to exhibit typical behaviour during the data collection.

The participants' voice calls take place in an application called Discord. Discord is an application for instant messaging, voice and video chatting, and a platform for digital media distribution. It was launched in 2015 and was originally made for gamers to communicate with each other (Delfino & Dean, 2021). On Discord, users can send text messages to one another in online communities called servers, as well as voice-chat and video-chat with one another and livestream games or any other programs from their devices. Discord was chosen as the platform for data collection primarily because it is the platform that the participants use primarily for communication while gaming and because it has widespread popularity among Internet users worldwide.

The dates and times in which the gaming sessions were recorded were dependent on the participants' and the informant's availability. In order to ensure that participants are playing games with one another on their own volition and not for the sake of the study, the informant was asked to record gaming sessions whenever they occurred and whenever the informant was available to do so. No particular timeframe for data collection was stipulated by the researcher, only that the recordings should be longer than 1 hour. This is to ensure that recordings would include moments during-gameplay, not just conversation pre- or post-gameplay. Additionally, the informant was requested to record more than one gaming session in order to ensure that code-switching behaviours do not occur in one isolated situation but do occur commonly in the speech patterns of the participants as they are gaming. A total of three sessions were recorded but only two were used for analysis. The first recording was done on the 13th of November, 2021, at 9:02 pm, and has a length of 1 hour and 2 minutes. The second recording was done on the 18th of November, 2021, at 10:40 pm, and has a length of 1 hour and 18 minutes.

In past studies that used the pragmatic approach to study the code-switching of gamers, such as Vuorinen (2008) and K ärn ä (2015), around 60 minutes of transcribed interactions were analysed. Similarly, the present study follows in the footsteps of past studies and 30 minutes from the two recordings were randomly selected in order to create 60 minutes of transcription for analysis. The program used for transcription was ELAN version 6.3, a free computer software developed by Nijmegen: Max Planck Institute for Psycholinguistics (2022) as a tool for annotating and transcribing audio or video recordings. As for the transcription system, the Jefferson (2004) transcription system was used as it captures not just what is said by participants but the way in which utterances are said as well.

In order to ensure intercoder reliability in part of the audio transcription, two intercoders were recruited to check the transcribed data. With two intercoders, a certain level of subjective judgement on the consistency of the transcription can be ensured, which is an important factor in qualitative studies such as the present one.

V. FINDINGS

The findings of the present study are illustrated through conversational extracts taken from the transcribed data. Three extracts that exemplify Auer's distinction between participant-related and discourse-related code-switching are presented in this article.

A. Participant-Related Code-Switching

In analysing participant-related code-switching, the present study not only draws from Auer's definition of the term but Shin and Milroy (2000)'s additional differentiation of this type of code-switching as well. In their study on the code-switching behaviours of Korean-English bilingual children, a distinction was made among participant-related code-switching between preference-related and competence-related code-switching. The former type is motivated by the participants' evaluation of one another's preference for a language, while the latter is motivated by the participants' evaluation of one another's competence in a language.

(a). Preference-Related Code-Switching

Extract (1).

In this extract, participants are in the middle of a match of *Valorant*. Shirogane is telling Chika to adopt a strategy where he "fakes his footsteps" or makes fake footsteps sounds in order to confuse the opposing team about his character's position on the map. As players cannot see where the opponent is on their map, listening to footstep sounds is one method that players use in order to discern the opponent's position. By confusing the opponent about their position in the map, they can lure the opponent into moving into a position where they can eliminate them more easily.

| 5 | Shirogane | =Ch-Ch-Chika Chika listen [to me listen to me] |
|----|-----------|--|
| 6 | Chika | [Complain with Kobachi.] |
| 7 | Shirogane | Chika Chika Chika. |
| 8 | | (.) |
| 9 | | Just run run towards_ |
| 10 | | (.) |
| 11 | | Towards hall เว้ยเชื่อกู กูแบบกูเป็น fake footstep แบบทุกรอบเลย_ |
| 12 | | (.) |

```
13
                   นี่มันก็คิดว่ากูจะ fake footstep เว้ย.
     Kaguya
14
                   ไม่ [จำเป็น.]
15
     Chika
                   [[ แต่ว่า ] แต่ว่า แต่ว่า,]
16
     Shirogane
                   [[อยู่ไหนวะ] เหี้ยกูว่า กูตาย_]
17
18
     Chika
                   แต่ว่าเสียง footstep กูมันแบบ.
19
20
                   เปียกๆอ่ะ.
21
                   (.)
22
                   Vision vision,
23
                   (0.5)
24
                   Vi[sion มันเปียกๆอ่ะ.]
25
     Shirogane
                   [>ไม่ต้องวิ่งไม่ต้องวิ่ง<] เฮ้ยไม่ต้องวิ่งไม่ต้องวิ่งไม่ต้องวิ่งเดินแบบโง่ๆอ่ะ.
26
                   (0.8)
27
     Chika
                   โง่.
```

Shirogane begins addressing Chika in English, as that is the language that he evaluates Chika to prefer more based on past conversations, but then switches to Thai as that is the language that he is more comfortable in. In lines 5 and 7-11, he tells Chika what to do in English: "listen to me," "just run towards hall." Halfway through line 11, however, he codeswitches to Thai "เว้ยเชื่อกู กูแบบกูเป็น fake footstep แบบทุกรอบเลย 'believe me I did fake footstep every round" and continues with Thai in line 13, "นี้มันก็คิดว่ากูจะ fake footstep เว้ย 'they still think that I will fake footstep." Though the words "fake footstep" were spoken in English, the majority of the utterance is in Thai, and the grammatical structures of the sentence adhere to Thai grammar as well. The usage of "fake footstep" in English is most likely due to the fact that it is a gaming-related term that originates in English, and it is more natural for them to use it verbatim in its original language.

Chika, who spoke more English than Thai in both transcripts, in evaluating that Shirogane prefers speaking Thai, responds back to Shirogane in Thai. In line 18-20, where Chika says, "แต่ว่าเสียง footstep กูมันแบบเปียกๆอ่ะ 'but my footstep sounds are wet'" the term "footstep" was, once again, used in English, most likely to mirror Shirogane's usage of the term "fake footstep." Regardless, the sentence adheres to the Thai grammatical structure. He says "footstep กู," which translates to "my footstep," but places the possessive pronoun behind the noun according to Thai grammar.

Even though this particular sequence was initiated in English by Shirogane, the language of the sequence was changed into Thai once participants evaluated that Thai was the preferred language of Shirogane, the person who initiated the conversation. In lines 24-27, their interaction continued in Thai, though interestingly, Chika also performs discourse-related code-switching in this extract by bracketing a side-sequence through code-switching to English. Though he was responding to Shirogane in Thai, in lines 22-24, he code-switches to English to say "Vision, vision, vision" to his other teammates in order to inform them that the opponent team are visible.

This extract is a display of how two participants, Chika and Shirogane, negotiate around one another's language preferences in the interaction. In this extract, Chika conforms to Shirogane's preferences and Thai is established as the primary language for the interaction.

(b). Competence-Related Code-Switching

Extract (2).

In this extract, participants are in the middle of another match of *Valorant*. There is not much conversation going on as participants are focused on what is happening in-game. However, participants are still making callouts as they are playing in order to inform one another of what is happening in the match. As a team game, maintaining effective communication with teammates is crucial for victory.

```
979
                  [Back] back back_
      Kobachi
980
                  (0.5)
981
      Ishigami
                  าเออ:,
982
                  (1.4)
983
      Chika
                  One close.
984
                  (.)
985
                  [Mid,]
986
      Kobachi
                  [Ahh,]
987
                  (0.6)
988
                  Go in the trap.
      Chika
```

```
989
                  (1.3)
990
      Kobachi
                  เห้ย warp มัน-_
991
                  (0.6)
992
                  Warp doesn't work bro_
993
                  (1.1)
994
      Chika
                  มัน- It work but they shoot you too fast_
995
996
      Shirogane
                  มันน่าจะหา Chika อ่ะ.
```

In the beginning of this extract, Kobachi and Chika are making callouts. Kobachi says "back," telling teammates to move back, while Chika says "one close" and "mid" to inform teammates of the position of one of the enemies (one opponent is close, in the middle of the map). These callouts are done in English, as a majority of gaming-related terms are often used by gamers in its original language without translation.

The interaction occurs in English with some acknowledgements in Thai by Ishigami as in line 981. However, when Kobachi wants to tell teammates about a possible malfunction with the "warp," or the teleporter, which is essentially a machine in which players can walk inside in order to be teleported to another part of the map. Competence-related code-switching occurs when Kobachi begins his utterance in Thai "the warp in- 'Hey [the] warp it-" but is unable to finish his sentence as he seems to be unable to find the right words to describe what is wrong with the teleporter. He immediately code-switches to English to say "Warp doesn't work bro" instead. There is a lack of competence in Kobachi's part here, as he could not continue the rest of his sentences in Thai, the language that he started the utterance with. Chika, aware of Kobachi's inability to describe the situation in Thai, begins his utterance in Thai with "iu- 'It-" but quickly code-switches to English to say, "It work but they shoot you too fast." In this extract, not only is Kobachi code-switching in order to compensate for his own competence-related issue, but Chika also code-switches in order to adapt to Kobachi's communicative needs. In this way, the participants employed code-switching as a means to lessen potential communicative confusion among them.

B. Discourse-Related Code-Switching

Discourse-related code-switching is code-switching that is employed to organise and structure the ongoing conversation. Used as a contextualisation strategy, this type of code-switching is employed with respect to organisational tasks such as turn-taking, preference organisation, or bracketing of side-sequences. In this section, an extract displaying how participants accomplish conversational repair through code-switching is presented.

```
Extract (3).
     Kobachi
65
                  Bro it's a BED,
66
                  (0.9)
67
                  You guys- You [guys don't ] understand ລ່ະ.
                                  [It's a BED,]
68
     Chika
69
                  (.)
70
                  มันคือเตียง_
71
                  (.)
72
                  What?
73
                  (0.7)
74
     Kobachi
                  [It's a] bet bro >it's a bet it's a bet it's a bet<.
75
     Kaguya
                  [hhh Ha?]
76
     Chika
                  (มัน)อยู่ที่เตียง =
77
     Kaguya
                  =ระวังโดน trade นะ Ishigami,
                  (2.1)
78
79
     Shirogane
                 Oh.
80
                  (0.6)
81
     Kobachi
                  เฮีย Chika you don't understand อ่ะ.
82
83
                  And you like [ skim] like.
84
     Chika
                                [(ครับ.)]
85
                  (.)
     Kobachi
                  You don't know how to play Chamber ລ່ະ Chika like for
```

 87
 real_

 88
 (.)

 89
 Chika
 ครับ ครับ.

This extract presents an example of conversational repair done through code-switching. The type of repair done here is called other-initiated self-repair, meaning that the repair operation is initiated by another participant that is not the speaker of the trouble-source (Albert & de Ruiter, 2018). Once the repair operation is initiated by the other interlocutor, the repair is then completed by the speaker. Other-initiated repairs are often initiated in the turn immediately following the trouble source, however they can also occur beyond the next turn as well. When repairing the trouble-source, speakers may repair through methods such as repetition or clarification. In this extract, Chika initiates a repair operation with Kobachi, and Kobachi clarifies the misunderstanding by repeating what he said.

The trouble-source is in line 65, where Kobachi says, "Bro it's a BED." The confusion here is caused by the word "bed." In the context of the situation, Kobachi makes the utterance out of nowhere, as there are no beds in the game and the topics of the prior conversation have nothing to do with beds. Though Kobachi follows up with another utterance after making this trouble-source utterance, Chika interjects in the middle of said utterance and there is a moment of overlapping talk between the two of them. Chika interjects to repeat what Kobachi said, "It's a BED," thus directly identifying the trouble-source. He then code-switches to Thai in line 70, "มันคือเดียง 'It's a bed," as a way to confirm that he had understood Kobachi correctly. This is then followed by a common other-initiated repair device, "what?" in order to emphasise that a repair has been initiated. Note that "what?" is considered a language-specific other-initiated repair device, meaning that Chika code-switches back to English in order to ask for clarification for the original statement that is in English (Albert & de Ruiter, 2018). By repeating and then performing code-switching in the way of translating Kobachi's utterance, Chika is using a second language in order to identify the trouble-source and initiate a repair operation.

Recognising this repair operation, Kobachi completes the repair by saying what he had meant to say, "It's a bet." However, this self-repair appears to be unclear to Chika, as he code-switches to Thai again to say, "มันอยู่ที่เดียง 'It's on the bed." Not recognising that Chika initiated another repair operation, Kobachi changes the topic to talk about the game, and this second repair operation is left unrepaired.

In this extract, Chika code-switches to Thai twice in order to initiate repair with Kobachi. His multilinguality is useful here in that it allowed him to directly address the trouble-source by means of translating the trouble-source itself into another language in order to ask for clarification on whether he understood what Kobachi said correctly. In this way, code-switching is used as a tool for performing conversational repair among participants.

VI. DISCUSSION

Analysis of patterns of participant-related and discourse-related code-switching revealed that participants employed both types of code-switching in order to structure their discourse. In extract 1, two participants, Chika and Shirogane, were shown negotiating the primary language of their interaction. Though the sequence began in English, the two participants code-switched to Thai once they had evaluated that Thai is Shirogane's preferred language. In this extract, Chika conforms to Shirogane's preference and the language of the conversation is switched as the interaction unfolds. A similar situation was found in Chanseawrassamee and Shin (2009)'s sequential analysis of two Thai bilingual siblings' interaction, where participants of the study were each motivated by their own language preferences in their interactions with one another. One sibling preferred English while another preferred Thai, and the two were observed to have negotiated the language of conversation with one another through code-switching, where the performance of code-switching of one participant was found to trigger the other to switch to the other language as well.

Extract 2 also deals with a kind of participant-related code-switching, but this is of the competence kind rather than preference. In extract 2, Kobachi's failure to continue his utterance in Thai leads to Chika code-switching to English in order to accommodate his needs. This is a display of how multilinguals monitor not only the language preferences of other participants but also the mistakes and hints of insecurity in their speech production as well, which in turn motivates them to adapt their own language choices accordingly.

As for discourse-related code-switching, extract 3 presents an example of conversational repair done through code-switching. After the trouble-source, which was uttered in English, occurred, a repair sequence was initiated by Chika by means of code-switching to Thai. This was done in the form of translation of the trouble-source, and it was done in order to directly notify the other interlocutor that confusion has occurred, with increased volume and the "What?" utterance in another line to support this initiation of the repair sequence. The repair sequence is then completed once the participant who uttered the trouble-source explained what he meant. Though only one example of an organisational task being accomplished through code-switching was shown in this article, participants were found to have used code-switching to complete other organisational tasks such as turn-taking, preference organisation, and bracketing of side-sequences in line with past studies such as Shin and Milroy (2000) and Chanseawrassamee and Shin.

Based on these findings, the present study concedes with past studies that code-switching is a general procedure that is available to multilinguals for language negotiation and for managing conversational tasks, and that multilingualism should be viewed as an additional linguistic and interactive resource that is unique to those that are able to communicate

in more than one language. Other than traditional contextualisation cues such as intonation, loudness, and tempo, these multilingual participants had access to, and were found to have employed, code-switching as an additional means to organise their discourse.

The pragmatic approach, particularly Auer's sequential analysis approach and differentiation of participant-related and discourse-related code-switching, proved useful for unravelling the ways in which code-switching was used by participants to structure their discourse. This study has presented a sequential analysis of the code-switching behaviours of one group of gaming multilinguals, and studies that employ this method should be diversified to include more varieties of gaming multilinguals in order to capture the ways that this group of people, who now make up a majority of the youth in this day and age, communicate with one another. Some suggestions for further studies that the present study proposes are studies that compare code-switching behaviours of gaming multilinguals while they are gaming versus in regular conversation, and studies that look into code-switching behaviours performed across different types of game genres. Through the present study, the researcher hopes to have presented one way in which video games, as a cultural artefact and an influential medium, can be studied from a linguistic perspective. As the youth of the newer generation adopt hobbies that involve them in multimodal and multilingual spaces such as video gaming, the ways in which these spaces affect them and their repertoires is a subject worthy of study not only psychologically, culturally, but linguistically as well.

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