

Virtual Versus Physical Code-Switching in English Language Classrooms

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Abstract—This study aimed to investigate the students' perceptions serving as a mirror reflecting what they perceived concerning whether applying the pedagogy of code-switching by the teacher and the students themselves was effective in both face-to-face and virtual setting English classrooms in comparison. The participants of this study were 114 English as a foreign language undergraduate student. Their first language was Thai and attended the fundamental English subject at a comprehensive university in Thailand for two semesters. They also have attended the face-to-face classes in the first semester and the virtual setting classes in the following semester. The tools implemented for collecting the data were the distribution of questionnaires online with the open-ended questions together with the classroom observation. The findings showed that applying the code-switching in the language classrooms was advised for only some specific setting as applying this strategy was perceived less necessary in the virtual classroom setting. However, it was considered as a natural phenomenon occurring rather often both face-to-face and virtual classes. As an educator, applying this pedagogy should be carefully considered for making it most beneficial for the students studying in different settings

Keywords—code-switching, English language classroom, face-to-face classroom, virtual classroom

1 Introduction

After implementing English courses into all levels of education, some educational institutions have initiated the program in which English was used as a mean of communication for both language and content course instructions. Code-switching or the alternate use of two or more languages in the same utterance or conversation, therefore, came to play some role in delivering the meanings of those terms and in getting some complicated parts of the content across. Some researchers, however, claimed that the language learners required adequate quantity of exposure to that language to reach the ultimate competency level which could be implied as the use of first language (L1) could hinder their second language (L2) learning. Furthermore, implementing the pedagogy of code-switching has been widely acknowledged, yet the world has been changing within no time as the new environment of the code-switching has been environmentally

employed virtually instead of the normal face-to-face teaching and learning as today's people have been surrounded by digital media through smart phones [1]. They have been reading and writing in digital format which could allow them to enhance new literate skills and abilities to learn content concepts. It has been, also, reported that young adults could perform academic task better if they learnt through the internet, meaning that acquiring knowledge in a formal classroom will be less likely effective than that of conducting in the virtual classroom [2]. The youth report also shared the feeling of not being up to date from academic learning when teachers failed to spend their funds of knowledge of digital literacies [3]. Thereby, some of the virtual worlds like VRChat have offered a promising context for academic learning where multiple users are able to interact in a shared space in real time by creating motional characters. The new virtual environment of the code-switching has been, thereby, proposed and the comparative study of either the normal setting, face to face code-switching or the virtual code-switching has been explored in this study.

2 Literature review

The issue of whether L1 should be included in L2 classroom has long been controversial among scholars [4]. Some of them believed that to learn L2, learners were to be adequately provided with input of that L2. This could be implied that the more input has been produced, the better output has been achieved. On the contrary, some tended not to believe in the hypothesis as they based their claim entirely on learner's perception supporting the idea of including L1 in L2 class. However, it was stated that [5] the uses of English by non-native speakers would predominantly be online virtually through using English language digital resources, and in computer-mediated communication with other non-native speakers of English. One of the emerging technologies, the VRChat virtual world, for example, has provided learners of English as a Foreign Language with a unique of opportunity of learning authentic [6]. This was currently regarded as the most popular of the virtual platform the users were able to be connected to a virtual hub and could, then, visit a multitude of virtual rooms and socialize with other users presenting in the same room. Each user was represented by an avatar of their choice. Players can also join the game using the desktop version of VRChat, interacting with mouse and keyboard [7].

Though the terms of L1, first language, primary language, native language, or mother tongue in some contexts have been defined with slightly differences in their meanings, they were treated with no distinction either face to face class or the virtual one as the researchers have classified the functions of code-switching as follows, topic switch, affective functions, and repetitive functions. In terms of the topic switch function, the teachers code-switch in accordance with the topic being discussed. This function of code-switching was most frequently observed in language structure instruction. By shifting the code of language to the native language of the students, their attention was directed to the newly introduced knowledge being taught. It was further explained that "a teacher can exploit students' previous L1 learning experience to increase their understanding of L2" both in a normal and virtual settings [8].

Another function of code-switching was affective function or the function that expressed the emotions of the users. Both face to face environment and virtual one could help in creating an intimate relationship between teachers and their students.

The repetitive function of code-switching was another function assisting the user to ensure the clarity of the important knowledge. Teachers performed code-switching to native language to provide clarification of meanings. By doing so, the importance of that part of content was emphasized for efficient comprehension as the virtual environment was a perfect setting where every participant can collaborate equally with other members of that virtual society [9]. Nevertheless, there were some disadvantages of code-switching in serving this function since the students' attention might be lowered for, they were certain that there would be an explanation of the instruction in their native language after one in L2. Therefore, the teachers themselves must take this weakness of using code-switching in their classrooms either face to face or virtual settings as the code-switching can also be used by students. It has been clarified that how the use of L1 in L2 classroom was initially viewed as an efficient means of learning any foreign languages by the students [10]. The use of L1 in L2 classroom was universally adopted into classrooms for the learning which was, back then, mainly through translation. One of the scholars [11] who was for the idea of including L1 in L2 classroom claimed that principled and restricted use of L1 in accuracy-oriented tasks was very much useful though there was a weakness in his claim as the conclusion did not come from the comparison of the performance of the learners taught in different ways. It was purely based on his own teaching experience because the virtual platform might be considered an alternative setting as every participant can collaborate equally with other members in such virtual society [9]. It was also indicated that the virtual setting had the potential to enhance language instruction as participating students engage in a collaborative learning journey with others across the globe, increased their verbal language ability and cultural awareness via goal-driven communication with native users of the target language which were exposed to the authentic language form [12].

Despite the controversy, this issue has previously been scrutinized in terms of the amount of the input and the outcome or the performance of the learners. However, there was another dimension that could be viewed this issue from; the perception of both teachers and learners towards the use of their L1 in L2 classroom either in the face to face or the virtual settings in comparison.

3 Methodology

3.1 Participants

The participants of this study were students attending the classes of a required fundamental English taught at an intensive university in Thailand. 114 participants have been purposively selected as the samples. The students have participated in the classes for two semesters, divided into 14 periods, two hours a period. The face-to-face code-switching classroom setting has been applied during the first semester followed by the virtual ones in another following semester.

3.2 Procedure and instrumentation

The tools employed in this mix-method study were the distribution of the online questionnaires with open-ended questions and the classroom observation.

The questionnaire was divided into two sections, consisted of nine questions. The first section of the questionnaire aimed at gathering the demographic data of the participants in general, namely genders, ages, length of study English as a foreign language, educational background, experiences of study abroad, and English proficiency self-evaluation. Another section was concerning the participants’ attitudes toward the use of L1 in English language classrooms, divided into four main questions to be ranked, namely the questions of the time students applied code-switch, the time teacher applied code-switch, the reasons of applying code-switching, and perspectives toward code-switching both in the face-to-face and virtual classes.

The observation notes were done during the class meetings. They were written as a journal for keeping track on the students’ interaction and expression during the classes. This particularly aimed at reflecting the reaction and expression of the students when some complicated parts of the content were being introduced and when L1 was being used or not during the periods both face-to-face and virtual ones. The participants were, finally, answered the opened ended questions which mainly targeted at retrieving in-detail information for a better understanding concerning the participants’ perceptions.

3.3 Data analysis

To analyze the gathered data, SPSS/PC (Statistical Package for the Social Science on Personal Computer) was employed in the study. After the questionnaire was distributed online to the subjects, the collected data of the participants’ personal data was calculated in the form of Frequency and Percentage. The data regarding the attitude of the students were analyzed and shown in Means, and the Likert Scale showing the levels of agreement which the criteria for rating the scale was interpreted as presented in Table 1.

Table 1. The criteria for rating the scale

X-Bar	Level of Agreement
4.50–5.00	Strongly agree
3.50–4.49	Agree
2.50–3.49	Neutral
1.50–2.49	Disagree
1.00–1.49	Strongly disagree

Table 1 clearly displayed the criteria employed in this study. There were only five levels of criteria scored in the questionnaire since the aim of the study have been solely investigating the participants’ perceptions. To be more specific, the levels of agreements were divided into five levels i.e., strongly agree, agree, neutral, disagree, and strongly disagree. All levels were accordant with the X-Bar score. The range of X-Bar score of 4.50–5.00 was considered as the level of strongly agree, and the lower X-Bar score of 3.50–4.49 was considered as agree level. The level agreement of neutral was considered at the X-Bar score of 2.50–3.49 while other two lower mean scores were also implemented in the study. That is to say, the level of disagree was equal to the range of the X-Bar score of 1.50–2.49 while the lowest level of agreement as strongly disagree was equal to the X-Bar score of 1.00–1.49. After all the data were elicited from the participants by distributing questionnaire online, they were, then, analyzed by showing some statistic scores and the description to clearly show the meaning of the data in the following sections.

4 Results

Table 2. Students' perceptions toward their use of L1 in the English language classrooms

Items	Level of Agreement						N	X-Bar	Levels
	5	4	3	2	1				
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree				
I wanted to explain difficult concepts. (face-to-face)	44 (38.60%)	46 (40.35%)	24 (21.05%)	0 (0%)	0 (0%)	114	4.18	Agree	
I wanted to explain difficult concepts. (virtual)	26 (22.81%)	42 (36.84%)	46 (40.35%)	0 (0%)	0 (0%)	114	3.82	Agree	
I wanted to make jokes. (face-to-face)	34 (29.82%)	46 (40.35%)	30 (26.32%)	4 (3.51%)	0 (0%)	114	3.96	Agree	
I wanted to make jokes. (virtual)	30 (26.32%)	20 (17.54%)	18 (15.79%)	46 (40.35%)	0 (0%)	114	3.29	Neutral	
I wanted to ensure my understanding of the introductions given. (face-to-face)	34 (29.82%)	54 (47.37%)	26 (22.81%)	0 (0%)	0 (0%)	114	4.07	Agree	
I wanted to ensure my understanding of the introductions given. (virtual)	6 (5.26%)	12 (10.53%)	32 (28.07%)	54 (47.37%)	10 (8.77%)	114	2.56	Neutral	
I wanted to carry out small group discussion. (face-to-face)	30 (26.32%)	52 (45.61%)	30 (26.32%)	2 (1.75%)	0 (0%)	114	3.96	Agree	
I wanted to carry out small group discussion. (virtual)	6 (5.26%)	18 (15.79%)	30 (26.32%)	54 (47.37%)	6 (5.26%)	114	2.68	Neutral	

In Table 2, the students had some specific reasons to use code-switching in the classroom, showing the main reasons in code-switching by the students were to explain the difficult concepts, to make jokes, to ensure their understanding of the introducing given, and to carry out small group discussion in both face-to-face and virtual classes. Statistically, using code-switching to explain difficult concepts was ranked the highest in face-to-face class ($X\text{-Bar} = 4.18$) while it was ranked lower in the virtual class ($X\text{-Bar} = 3.82$). Though the results can be meant they agreed that they mostly used this technique in the classroom for explaining difficult concepts compared to other reasons, the need of using this technique in the face-to-face class was lower than that of the virtual one.

Furthermore, the use of code-switching to ensure their understanding of the introductions given was rank the second with the $X\text{-Bar}$ score of 4.07 happened in the face-to-face class, yet the reason was ranked the lowest in the virtual one with the score of only 2.56, meaning that the students agreed to apply this technique for such reason in the face-to-face class, yet they were indifferent of using the code-switching in the virtual class. To illustrate, 29.82% of the students strongly agreed that they did code-switch when they wanted to ensure their understanding of the introductions given in the face-to-face class while most of the students, 47.37% disagreed to apply this technique in the virtual class.

Another two items considered by the students when they did code-switch were to carry out small group discussion, and to make jokes. Though the two items here happened in the face-to-face class were at the same level of the $X\text{-Bar}$ score (3.96), the percentage of code-switching applied by the students to make jokes with the level of strongly agree was higher than the reason of carrying out the small group discussion. To be more specific, 29.82% of the students or 34 students strongly agreed that they did switch-code when they wanted to make jokes, and only 26.32% of them strongly agreed that they used this technique when they wanted to carry out small group discussion. Interestingly, this phenomenon was completely opposite to what happened in the virtual class as the students perceived using the code-switching for both reasons was not as much necessary as using in the face-to-face class with neutral level of agreement as most of the students disagreed to apply this technique in the virtual class at 47.37% counted of 54 students.

All in all, students perceived using the code-switching technique in the face-to-face classroom was more necessary compared to the use of it in the virtual one for specific reasons mentioned above.

Table 3. Students' perception toward the teacher's use of L1 in the English language classrooms

Items	Level of Agreement					N	X-Bar	Levels
	5	4	3	2	1			
	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)			
Teacher wanted to explain difficult concepts. (face-to-face)	54 (47.37%)	30 (26.32%)	24 (21.05%)	4 (3.51%)	2 (1.75%)	114	4.14	Agree
Teacher wanted to explain difficult concepts. (virtual)	52 (45.61%)	28 (24.56%)	22 (19.30%)	6 (5.26%)	6 (5.26%)	114	4.00	Agree
Teacher wanted to introduce new materials. (face-to-face)	18 (15.79%)	44 (38.60%)	44 (38.60%)	8 (7.02%)	0 (0%)	114	3.63	Agree
Teacher wanted to introduce new materials. (virtual)	8 (7.02%)	6 (5.26%)	54 (47.37%)	42 (36.84%)	4 (3.51%)	114	2.75	Neutral
Teacher wanted to summarize material already discovered. (face-to-face)	16 (14.04%)	56 (49.12%)	36 (31.58%)	6 (5.26%)	0 (0%)	114	4.07	Agree
Teacher wanted to summarize material already discovered. (virtual)	8 (7.02%)	8 (7.02%)	42 (36.84%)	52 (45.61%)	4 (3.51%)	114	2.68	Neutral
Teacher wanted to help students feel more comfortable and confident. (face-to-face)	28 (24.56%)	40 (35.09%)	40 (35.09%)	4 (3.51%)	2 (1.75%)	114	3.77	Agree
Teacher wanted to help students feel more comfortable and confident. (virtual)	24 (21.05%)	40 (35.09%)	44 (38.60%)	4 (3.51%)	2 (1.75%)	114	3.70	Agree
Teacher wanted to check for comprehension. (face-to-face)	10 (8.77%)	34 (29.82%)	54 (47.37%)	12 (10.53%)	4 (3.51%)	114	3.30	Neutral
Teacher wanted to check for comprehension. (virtual)	6 (5.26%)	6 (5.26%)	38 (33.33%)	52 (45.61%)	12 (10.53%)	114	2.49	Disagree
Teacher wanted to explain the similarities and differences of L1 and L2. (face-to-face)	20 (17.54%)	44 (38.60%)	44 (38.60%)	4 (3.51%)	2 (1.75%)	114	3.67	Agree
Teacher wanted to explain the similarities and differences of L1 and L2. (virtual)	10 (8.77%)	34 (29.82%)	54 (47.37%)	12 (10.53%)	4 (3.51%)	114	3.30	Neutral
Teacher wanted to define new vocabulary items. (face-to-face)	22 (19.30%)	50 (43.86%)	38 (33.33%)	2 (1.75%)	2 (1.75%)	114	3.77	Agree
Teacher wanted to define new vocabulary items. (virtual)	8 (7.02%)	8 (7.02%)	42 (36.84%)	52 (45.61%)	4 (3.51%)	114	2.68	Neutral

Students not only investigated themselves using the code-switching in their classroom but perceived the time teacher did code-switch in Table 3. The students perceived that there were seven categories related to the reasons teachers used code-switch in both face-to-face and virtual classes. The teacher did code-switch when they wanted to explain difficult concepts, to introduce materials, to summarize materials, and to help students feel more comfortable in the class. Moreover, the teachers also used this technique when they wanted to check for students' comprehension. It was also used when they either explained the similarities and differences of L1 and L2 or wanted to define new vocabulary items for the students in the classrooms.

To be more specific, the first two highest ranked reasons why the teachers used code-switching in the face-to-face classes according to the students' perceptions were to explain difficult concepts and to summarize materials already discovered with the X-Bar scores of 4.14 and 4.07 respectively which the students agreed with the teachers applied this technique for such reasons. However, it was found contradict of the level of use in the virtual classroom specifically for the reason of summarizing materials as the students perceived it was less necessary of applying the technique in the virtual classroom with the neutral level of agreement and most of the students (45.61%) disagreed with the teachers' use of such technique for this reason. Furthermore, the two items ranked equally were to help students feel more comfortable and confident and to define new vocabulary items in the face-to-face classrooms with the X-Bar score of 3.77, yet the students perceived opposite for the reason of defining new vocabulary as they perceived it was less necessary of applying such technique in the virtual classes with the neutral level of agreement. The study also found that students perceived the teachers did switch-code when they wanted to explain the similarities and differences of L1 and L2 in the face-to-face classroom with the X-Bar score of 3.67 while another item like to introduce new materials was ranked lower (X-Bar = 3.63). Though both reasons of using code-switch by the teachers were ranked with the same agree level of agreement in the face-to-face class, the virtual classes were perceived differently as the students' level of agreement was at the neutral level. Interestingly, there was only one item perceived by the students the lowest in the face-to-face classes, they wanted to check for comprehension, with the level of neutral or the X-Bar score of 3.30 while it was ranked even lower in the virtual ones. All in all, students' perceptions toward using the technique of code-switching by the teachers in the face-to-face class were at the level of 'agree' except the only one item ranked at the level of 'neutral' which was the technique used by the teacher to check for comprehension. On top of that, all reasons of using the code-switch by the teacher were perceived less necessary applying in the virtual classrooms.

Table 4. Students' perceptions toward the impact of using of L1 in English language classrooms

Items	Level of Agreement					N	X-Bar	Levels
	5	4	3	2	1			
	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)			
L1 hindered my English learning. (face-to-face)	4 (3.51%)	50 (43.86%)	40 (35.09%)	16 (14.04%)	4 (3.51%)	114	3.30	Neutral
L1 hindered my English learning. (virtual)	8 (7.02%)	6 (5.26%)	54 (47.37%)	42 (36.84%)	4 (3.51%)	114	2.75	Neutral
L1 helped me in my English language learning. (face-to-face)	16 (14.04%)	50 (43.86%)	42 (36.84%)	4 (3.51%)	2 (1.75%)	114	3.65	Agree
L1 helped me in my English language learning. (virtual)	8 (7.02%)	8 (7.02%)	42 (36.84%)	52 (45.61%)	4 (3.51%)	114	2.68	Neutral
L1 helped me in understanding the content of the course. (face-to-face)	36 (31.58%)	52 (45.61%)	22 (19.30%)	4 (3.51%)	0 (0%)	114	4.05	Agree
L1 helped me in understanding the content of the course. (virtual)	8 (7.02%)	6 (5.26%)	54 (47.37%)	42 (36.84%)	4 (3.51%)	114	2.75	Neutral

The last items asked the participants to rank the level of agreement in the study was the participants’ own perspectives toward if the code-switching work in English language learning both in the settings of face-to-face and virtual shown in Table 4. The main three items were employed in this section to be ranked if the L1 hinders English learning, helps in English learning, and helps in understanding the contents of the course. The data in the table statistically shows that the students only agreed with using the code-switching specifically in the face-to-face classes which can help them in understanding the content of the course and help them in English language learning with the X-Bar score of 4.05 and 3.65 respectively. However, there were some of them perceived this technique could hinder their English with the X-Bar score of 3.30 in face-to-face classrooms at the neutral level of agreement similarly to the virtual ones with the same level of the agreement though the X-Bar score was lower at 2.75.

Table 5. The perceptions of the students toward the use of L1 elicited from the open-ended questions

Perception	Answers	Number	Percent
1. L1 should be used in face-to-face class.	Yes	80	70.18%
	No	34	29.82%
2. L1 should be used in virtual class.	Yes	34	29.82%
	No	80	70.18%
3. You perceived the use of L1 as a distraction to you learning in the face-to-face class.	Yes	30	26.31%
	No	84	73.69%
4. You perceived the use of L1 as a distraction to you learning in the virtual class.	Yes	80	70.18%
	No	34	29.82%
5. L1 helped you in understanding the content of the course taught face-to-face.	Yes	104	91.23%
	No	10	8.77%
6. L1 helped you in understanding the content of the course taught virtually.	Yes	32	28.07%
	No	82	71.93%

Table 5 portrayed how the students perceived about applying the code-switch in English language classrooms both face-to-face and virtual mentioned in the open-ended questions in the questionnaire. Though they perceived the use of L1 should be made use of in the class, most of them disagreed to apply them in the virtual ones. They also thought that it was considered as a distraction to their language learning in the setting of virtual classrooms while the opposite agreement of applying the technique in the face-to-face classrooms has been confirmed. Interestingly, as high as 91.23% of the students believed that the use of L1 can facilitates them in getting the content of the course across in the setting of the face-to-face classrooms while they disagreed that would be necessary in the virtual setting.

5 Discussion

5.1 Functions of students' code-switching in both face-to-face and virtual settings

The study found that the main reasons the students themselves applied the code-switching were to explain the difficult concepts, to make jokes, to ensure their understanding of the introducing given, and to carry out small group discussion. In terms of explaining the difficult concepts, the students ranked themselves the highest. It means most of them agreed that they mostly use this technique in the classroom for describing some difficult concepts both in the face-to-face class and the virtual classes though the use of it in the virtual setting was ranked lower. To make jokes, the students perceived that it was less necessary to change their English to Thai (L1) in the virtual classroom setting compared to the face-to-face one as they “felt more comfortable without the need of making jokes while studying virtually”. In addition, the students agreed that they did code-switching when they wanted to ensure about some specific information in the face-to-face setting, yet they thought believed that applying this technique was less necessary as they “were able to find more information needed themselves when they did not clearly understand some specific contents”. It has been mentioned that the function to be introduced was floor holding, the students can fill the stopgap with native language use as it was suggested that the code-switching used by the students was a mechanism to avoid gaps in communication [13], and they thought it was more appropriate to be done code-switch by the teacher in which the content was not clearly understood by the students. All in all, the main functions of the use of L1 by the students in studying L2 were to explain difficult concepts, to joke around with classmates, to define new vocabulary items and to check for comprehension only in the face-to-face class. However, the answers with the highest frequency matched the observation of the class seems go against the eyes of the observer as the it was less necessary applying this technique by the students while they were studying virtually [12]. The students themselves felt more independent while using English without switching to Thai (L1) in the virtual setting classrooms, “I can use English more confidently while I was in the virtual class compared to the real face-to-face class”.

5.2 Functions of teachers' code-switching in both face-to-face and virtual settings

Though the code-switching was used not only by the teachers, but the students themselves. The teachers, however, sometimes did code-switch when they were in the classroom unconsciously. The study showed that the students perceived the teachers did code-switch when they wanted to explain difficult concepts, to introduce materials, to summarize materials, and to help students feel more comfortable in the class. It was also perceived that the teacher has generated this behavior when they wanted to check the students' comprehension. In the same way, the code-switching was used by the teachers when they either explained the similarities and differences of L1 and L2 or wanted to define new vocabulary items for the students in the classroom [14]. However, these phenomena have been found different when it came to be applied in the

different settings of the classrooms, face-to-face and virtual ones. Though the students initially believed that the use of the code-switching by the teacher would help them in many aspects such as for explaining the new concepts, and summarizing the contents, they only agreed with applying this technique in only the face-to-face classrooms but not in the virtual ones as mentioned by the students, “we did not need the teacher explain the concept or summarize the contents while we were in the virtual class”, “I could find more information by myself about what the teacher was explaining in Thai (L1) by searching the internet while I was in the virtual classroom”.

Furthermore, the use of L1 in the class by the teacher in altering their language according to the topic that was under discussion was sometimes considered necessary but not in the virtual setting. For example, the teachers switched their L2 to L1 when they wanted to explain some grammar in the contexts during their teaching in the classroom as most of the students agreed that the teachers’ code-switching for this reason was needed in the face-to-face setting, but not in the virtual classes as they thought that “we can understand the grammar faster when we were in the virtual class as we can immediately search the thing we needed and did not need to wait for the teacher’s explanation”, and “I thought studying by myself through online in the virtual class was fun and teacher did not need to change English to Thai”. In addition, the teacher’s use of the code-switch when they wanted to help their students feel more comfortable and confident in some specific situations in the classroom was perceived differently in face-to-face classes in comparison with the virtual ones though mentioned in the previous study [15] that to maximize exposure in language learning, teachers were needed to alter their L2 to L1 to encourage students to communicate in the target language. The results from this research revealed that the teacher’s use of the code-switching for making the students feel more comfortable was not necessary as the students “felt comfortable enough in interacting in English with the teacher and friends virtually”. So that they perceived the teacher was not necessary to use Thai (L1) in teaching them in the setting of the virtual classes. However, in the face-to-face class was perceived more needed as supported by another study [16] mentioned that switches in the category function as in-group identity markers, can be realized through ‘wordplay’, where switches and mixes were creatively manufactured for comic effect. As a result, the teachers can generate the environment of comfort in the classrooms for students to feel more comfortable to learn L2 more effectively. Though it has been confirmed [17] that the code-switching was as a mean of conflict control and the learners’ knowledge of the target code became an additional linguistic resource performing quite surprisingly subtle discursive functions, it might be seemingly applied only in the old-fashioned face-to-face classroom, not in the updated virtual setting.

6 Conclusion

The study can be drawn a conclusion that with respect to all points mentioned above, it may be suggested that applying the code-switching in the language classrooms was advised for only in some settings. Though it was considered as a useful strategy in classroom interaction confirmed by the previous study, the present changing technology

in teaching and learning have had different impacts. To be more specific, applying this strategy was perceived less necessary by the students either using the technique by the students themselves or by the teachers in the nowadays virtual classroom setting. Though the code-switching was considered as a natural phenomenon occurring rather often both in class and in a normal situation, to make it most beneficial for the students, both teachers and students needed to consider its use wisely, especially applying it in the virtual setting as the results in this study tend to confirm that the use of L1 in the L2 classroom may have negative consequences of hindering the students' language learning. When it comes to classes of the students with different native languages, code-switching should be avoided as some students will feel left out and might not be able to comprehend the content being taught thoroughly.

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