Exploring Online Chinese-English Bilingual Content and Language Integrated Learning Classrooms Through Moment Analysis

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Abstract: Bilingual education studies consider the fluid and dynamic linguistic repetoire of teachers and students as helpful resources accomplishing communicative goals in real-life context. This study examines the translanguaging practices of Chinese-English bilingual Content and Language Integrated Learning (CLIL) classrooms in an online environment. Data was collected through partiticpant classroom observation and interviews. Moment analysis is employed to analyze the creativity and costs of translanguaging moments of the stakeholders. The classroom observation demonstrated translanguaging, as a co-constructed communicative tool, was initiated both by the teacher and students as translanguaging agents. Specifically, peer interaction and question answering were two main contexts in which students initiated translanguaging. And the teacher initiated translanguing in three contexts, namely, acamedic content knowledge teaching, classroom feedback and classroom management. Results from interviews with the teacher and students revealed that English proficiency might be the primary factor spurring translanguaging practices. Weaker English proficiency would lead to more active translanguaging praxis. Besides, translanguaging forms might be mediated by socio- and cultural-linguistic factors. English is used to express compliment and approval while Chinese will be employed to offer constructive criticism. Lastly, the costs of translanguaging moments were furthure analyzed. It is concluded that students' translanguaging in the context of peer discussion lowered their cost of communication. Through code-mixing students' confidence in solving academic problems is boosted and their engagement in group project is promoted as well. Teacher's translanguaging lowered teacher's teaching cost and students' learning cost whereby the teacher-student confidence was co-constructed in this specific context. Whilst translanguaging pedagogy is endorsed in terms of content knowledge teaching and learning, it remains unclear whether the English proficiency is facilitated. Current research indicates it is important to be critical of translanguaging costs in integrating content and language learning.

Keywords: Content and Language Integrated Learning (CLIL), Moment analysis, Online classrooms, Translanguaging

1.   Introduction

Translanguaging was initially proposed as a descriptive term of different language choices between teacher and students, such as when the language of instruction is Welsh and the language of response is English, suggesting that this specific practice facilitating knowledge construction and problem-solving [1]. Later, the notion of language as a noun (named languages) has been expounded as a verb (languaging) [1]. This practical theory of language has been underpinned by an emergent body of empirical research across various educational contexts. In particular, translanguaging has implications for Content and Language Integrated Learning (CLIL) in bi/multilingual educational context. Translanguaging pedagogy is defined as the process of organizing and mediating mental processes to make meaning, gain understanding and knowledge through the dynamic and functional integration of all linguistic resources [2]. Translanguaging pedagogy emphasizes that teachers and students draw on all linguistic resources at their disposal to maximize their teaching, learning and understanding potentials, thereby the multiple communicative repertoires can be maximally recognised and valued [3].

Taken together, these findings all point to the legitimate role of translanguaging as a scaffolding tool in bi/multilingual education. Importantly, they voiced dissents upon classroom language policy where English was prioritized as the standard variety. However, given the fact that the testing system relies on the fixed standard language to assess learning outcomes, the assertion of translanguaging pedagogy was challenged [4]. Moreover, translanguaging practices in English-speaking or EMI contexts in countries and areas like the UK, USA, India and Hong Kong have been relatively well-documented, yet translanguaging study in Chinese mainland are under investigated. Since 2001, Chinese-English bilingual education through CLIL has been officially promoted in mainland China. The dual of focuses of CLIL are subject knowledge learning and language learning [5]. Whilst translanguaging is endorsed in some classroom-based CLIL studies, its affordances in online classroom setting are not conclusive with criticisms for not only failing to improve students' English proficiency, but also impeding subject knowledge learning. In response to the research gap, this study aims to investigate explore how Chinese-English bilingual teachers and students deploy their language repertoires through translanguaging praxis in the online CLIL contexts. Specifically, the following questions will be addressed:

(1). In what context, teacher-initiated translanguaging will occur in Content and Language Integrated Learning (CLIL) classrooms?

(2). In what context, students-initiated translanguaging will occur in CLIL classrooms?

(3). What prompt such translanguaging practices occur in CLIL classrooms?

(4). What consequences will such translanguaging practices lead to in CLIL classrooms?

2.   Methods

2.1. Research Desgin

Case study is especially well-situated to produce context-dependent knowledge in teaching situations. This study takes a case of online CLIL workshop in Chinese-English bilingual context as a research field. Moment analysis is employed as the data analyzing technique. It requires data from multiple sources [6], therefore, data was collected through participant classroom observation and interviews. This integration of multiple data collection methods is applied to gather diverse data about the same phenomenon [7] for a comprehensive understanding of the translanguaging practices in the focal CLIL classrooms.

Participant classroom observation was adopted as the primary method of data collection because observation and recording of naturally occurring data is particularly important for moment analysis

[6]. Also, classroom observation is conducive to data collection "in a rich milieu" [8] for a "thick description" [9] of the typical translanguaging practices among the focal online CLIL classrooms. These observations were accompanied by detailed field notes with special attention to the discourse of teacher-student, student-student interactions as well as teacher's monologue where different languages were involved. Notes were taken focusing on the specific contextual details, the researcher's tentative thoughts and critical reflections to guide future data collection and supplement the analysis stage. These observing data was supplemented by interview data to enhance triangulation [10].

Since the interview data can 'yield direct quotations from people about their experiences, opinions, feelings and knowledge' [11], semi-structured interview was conducted to the teacher while structured interviews were conducted to the students to collect data concerning language users' reflection on translanguaging practices operated by themselves as well as by others they are interacting with. The themes that emerged from the narratives triangulated with themes identified in the course of the analysis of observation data.

2.2. Research Context and Participants

The focal Content and Language Integrated Learning workshop is an online project-based learning program carried out in November, 2023 with the aim to construct the academic research competence for students' future in-depth studies and research in the area of education. Specifically, students were trained to learn how to develop testable research hypothesizes, how to do a thorough literature search and review, how to design an empirical project, collect data, critically evaluate and analyze the results, and effectively communicate their findings in a formal project report. For the final assessment students were required to develop an individual or group research project building on the concepts developed in the course.

The workshop is a condensed online program with a total of 16 sessions administered over one month with 5 sessions per week and each session lasting 90-120 minutes. Thereinto, weekly written assignments, final written report and oral presentation were all compulsory in English. 10 sessions were conducted with English as the only medium of instruction by a native American professor while the rest 6 sessions were conducted with an English-Chinese bilingual teacher. The latter where the bilingual nature of the classes made translanguaging practices possible served as the focal classes of this study.

All participants involved in this study were Chinese-English speaking bilinguals, including one female teacher and 16 students. Among student participants, there are 5 males and 11 females with a mean age of 22.6, who are all major in liberal arts and preparing for the application of future education abroad in the domain of education. The female teacher participant is a doctoral student in University of California, Los Angeles (UCLA) majoring communication who are proficient in both Chinese and English.

2.3. Data collection

The main data collection was a three-week focused participant observation of the online CLIL classes. A total of 6 bilingual class sessions were observed with each session lasting 90 minutes, amounting to 540-minutes observing data in total length. The observed classes were all videotaped and can be downloaded through the online Ed Discussion platform of the course (https://edstem.org/us/courses/48817/discussion/3893677). Semi-structured interview was conducted to the teacher after the fieldwork for approximately one hour. It was conducted online through Tencent Meeting, the most widely used videoconferencing application in China, and the interview content were video recorded. The teacher participant was interviewed about what prompted her

momentary translanguaging practices and the consequences of such moment. Structured interview was conducted to 16 students respectively after the course on the WeChat network. The interview questions were mainly about students' motivations and attitudes of translanguaging in different scenarios. Information collected also included students' language education background, such as the length of Chinese/English education, scores of English proficiency tests, etc.

2.4. Data analysis

The data analysis process began by transcribing the classroom and interview video using Atkinson and Heritage's [12] transcription conventions. All utterances that involve changing or mixing of languages will be coded as translanguaging. "Words" served as the basic unit of analysis. Moment Analysis [6] is employed to analyze the critical and creative translanguaging moments of the stakeholders. According to Li [6], moment refers to a point or a period of time which affects subsequent developments in a critical and creative way. Moment analysis focuses on the reasons prompting momentary actions of the individual and the consequences of such performances. In this study, the analytic attention is given to translanguaging moments between teacher and students in the focal classes, exploring what prompted such practices and what consequences would such practices lead to. Firstly, the author identified contexts wherein creative and critical translanguaging moments emerge through analyzing the classroom observation data with the focus on how teacher and students engaged in differentiated translanguaging practices. Then, the rationale behind such practices was explored by interpreting the interview data concerning translanguaging initiators' reflection and reactions by translanguging receivers. Last, the contributing factors influencing translanguaging were further investigated from analyzing how broader sociocultural, sociohistory and sociolinguistics factors interconnect with individual translanguaging agents.

3. Results

3.1. Students Initiated Translanguaging

Based on the classroom observation, translanguaging practices initiated by students occurred in the two contexts, namely peer discussion and answering teachers' questions. Representative examples of the two contexts are discussed below.

3.1.1. In the Context of Peer Discussion

Extract 1:

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01   STU1:   我就是比较倾向于higher education而且我很好拿sample
              (I prefer higher education also I have an easy access to those
                samples.)
02   STU2:   科目我可能比较偏向语言？例如 TESOL
              (Maybe I prefer languages such as TESOL.)
03   STU3:   语言方面的某些因素比如phonological awareness
              (Some factors in language such as the phonological awareness.)
04   STU4:   我觉得我们可以用某些AI tool 测试语言成绩来就是做spss软件的分析
              (I   reckon   that   we   can   use   some   tools   of   artificial
              intelligence to test language learning outcomes.)
05   STU1:   你还会想通过什么技术语音测试的AI技术现在被批的critic是很多
              (What other technology do you recommend? The AI technology
of voice recognition has many critics.)
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As Extract 1 shows that when students were discussing in the online group break-up rooms, their language was Chinese-dominated. The translanguaging form was code-mixing with only English terms embedded in Chinese utterances. Based on students' interview responses, on the one hand, they felt it was easier to express emotion and negotiate content knowledge using their mother tongue, since they do not have burden to consider the accuracy of English grammar, vocabularies and pronunciation when expressing ideas. On the other, they chose English to name terminologies which were originally taught and acquired in English during the class sessions. They were not sure how to translate the terms into Chinese and it was efficient to blend the English expressions directly into their Chinese communication to support meaning-making process. Thus, students translanguaging in the context of peer discussion lowered their cost of communication. Through code-mixing students' confidence in solving academic problems is boosted and their engagement in group project is promoted as well.

3.1.2. In the Context of Answering Teacher's Questions

Extract 2:
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01   TEA:    Sam, could you please decode this conversation transcription between
                the doctor and the patient?
02    STU:       可以试一下.hhh Uh:: (m) the only thing every once in a while I
                get a-=(get a-) uh:
03   TEA:        Sam? How about try the patient part first?
04   STU:     Sorry:::The patient 部分的转译对我有点难（is bit difficult for
                me.）我可以读 doctor 的部分吗？
05   TEA:          Ok
```
When the students were answering the teacher's questions during the class sessions, their languages were English-dominated with translanguaging practices in the form of code-switching. In Extract 2, the teacher's request was made in English, so the student answered in English, too. However, in Line 4 the student switched into Chinese when the question was beyond his capacity to answer. It is suggested from this momentary performance that Chinese will be employed to express apologetic withdrawing while English will be adopted as a formal respondence in the context of students' answering teacher's questions. Students' interview responses triangulated with this conclusion. 13 out of 16 students found it was easier to initiate request with their mother tongue, such as seeking for teacher's further instruction or changing other students to answer the question.

3.2. Teacher Initiated Translanguaging

Classroom observation indicates that teacher initiated translanguaging practices in the context of content knowledge teaching, classroom feedback as well as classroom management. The following are discussions of representative examples of the three contexts.

3.2.1. In the Context of Content Knowledge Teaching

Extract 3:
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01   TEA:     A hyphen indicates an abrupt cut-off or self-interruption of the
                sound in progress indicated by the preceding letters. 破折号意思是语句
                突然被别人或者自己中断
02   TEA:    Talk appearing within degree signs is lower in volume relative to
                surrounding talk.温度计符号的意思是话语音量比起周围声音要更低。
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Teacher translanguaging practices with the form of translation emerged in the process of academic content knowledge teaching. For instance, in Extract 3, the teacher was giving instruction in conventions of conversation analysis transcription. She took turns to use two languages conducted the teaching. Specifically, for each transcription convention, she employed English instruction for the

first round of teaching and made a switchover into the corresponding Chinese translations for the second round of teaching. The teacher said in the interview that spurring this translanguaging pedagogy by means of translation are due to the major concern of students' distinct English proficiency. She disclosed in the interview, "Upon students' registering and before the course started, I was informed of the details of students' English proficiency based on scores of IELTS Academic or TOEFL iBT which indicated insufficient English language ability over half of the students. Therefore, I administered English instructions together with subsequent Chinese translations to ensure that the important content knowledge could be acquired by every student." Moment analysis suggests that teacher's translanguaging in the form of translation lowered teacher's teaching cost and students' learning cost whereby the teacher-student confidence was co-constructed in this specific context. As such, content knowledge learning was facilitated. This conclusion triangulates with students' interview responses as 12 out of 16 students feel more at ease and 14 out of 16 students feel more confident when the teacher implemented Chinese translations for English instructions. Additionally, teacher's perspectives in the interview also rendered support. The teacher perceived that with academic terminologies and obscure theories, the research content knowledge is not readily comprehensible to average learners. As a result, she felt more at ease when she translated English instructions into Chinese because she did not need to worry about whether students understand her owing to linguistic barriers.

3.2.2. In the Context of Classroom Feedback

Extract 4:

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01   TEA:    Yeah, it's pretty good? 唯一有问题的地方就是没有 transcribe overlapping?
             (The    only    part    you    guys    are    missing    is
             overlapping.)就是这个左边的括号，它的意思是当 doctor 说到这个音节的时候
             patient 的第一个音节已经说出来了。(This left-side bracket means when
             the doctor says this syllable, the patient's overlapping talk
             begins at the same time.)
02   TEA:    But overall, you guys did an ex^cellent transcription.
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It is observed that after students answering questions or after students' report about their research, the teacher offered feedback with translanguaging via code-mixing. As shown in Extract 4, in terms of the selection of language for feedback, the teacher blended English terminologies with Chinese explanation. The aim of this moment action is two folds. Firstly, the terminologies were taught in English, hence feedback in English to keep the consistency of teaching. Secondly, as the process of error explanation and correction is complex, Chinese is adopted to guarantee the efficiency of communication and avoid similar mistakes. With respect to the content of feedback, interestingly, English is used to express compliment and approval while Chinese will be employed to offer constructive criticism. In the interview, the teacher ascribed this translanguaging motive to culturally influenced language customs. She shared her personal experience as a bilingual, "I grew up in China but I was seldom approved and praised in Chinese language, while I received my education in the US and felt that English is a language easier to affirm recognition or speak highly of somebody or something." This moment analysis infers that translanguaging forms might be mediated by socio- and cultural-linguistic factors.

3.2.3. In the Context of Classroom Management

Extract 5:

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01   TEA:    大家注意一下，我现在给大家布置一下转译作业。
             (Attention, please! Now I will go over the transcript homework
             for everyone.)
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02   TEA: 这个pdf,因为里面内容比较多.Um,对,OK. A few steps,of how to <u>proceed?</u>
First familiarize with yourself with the notation and convention
at the <u>last page</u> of this document. 在你们自己的转译作业中练习正确地使用
这节课学习的转译符号。（Practice how to use the transcribing notations
learned in this session in your transcribing assignment.）大家清楚
了吗？（Is that Clear?）

03   TEA: 每个小组转译一个课堂视频片段。（Each group is required to transcribe a class
video clip）Get it?

It has been identified that the teacher operated code-switching when she maintained the classroom disciplines and made announcements. For example, the teacher called attention and assigned homework in Extract 5 and she alternated between English and Chinese in the process. Moment analysis concludes that the main purpose is to deploy students' mother tongue to draw attention and to ensure that the important arrangements of the class is informed to every student. By this means, the cost of in-class and after-class students' participation is lowered. Noticeably, the teacher also performed code-switching when she double-checked for students' information receiving. But this momentary translanguaging followed irregular patterns, with the language choice at times being English some but at whiles being Chinese. When the teacher was interviewed about the prompt of such translanguaging practice, she reflected that she was not conscious what language she used under such circumstances. Hence code-switching in classroom double-checking was spontaneous, impromptu and unconscious actions while code-switching in classroom discipline maintaining and class schedule announcing was pedagogically designed.

4.   Conclusions

This study explores classroom contexts, reasons and functions of translanguaging practices by observing online Chinese-English bilingual CLIL classes. Moment analysis was proposed to analyze the creativity, criticality and costs of the emerged themes of transalnguaging moments in real classroom setting. Classroom observation data suggests Chinese-dominated peer discussion and English-dominated question answering as two translanguaging contexts for students and three translanguaging contexts for the teacher, namely, content knowledge teaching, classroom feedback and classroom management. Thereinto, translanguaging in content knowledge teaching was manifested in half-and-half Chinese with English translation. Classroom feedback was offered with English praise blended with Chinese rectification. Classroom management makes a case for the differentiation between pedagogical translanguaging and spontaneous translanguaging. Moment analysis reveals that students' translanguaging lowered the cost of communication empowering students to build confidence in solving academic problems and establish engagement in group projects. Teacher's translanguaging lowered teacher's teaching cost and students' learning cost whereby the teacher-student confidence was co-constructed through shared identity. It is further concluded that the English proficiency and sociocultural linguistic conventions affect translanguaging frequency and manifestations in the focal classrooms. Critically, interview data indicates that there was a clear-cut improvement for content knowledge teaching and learning, paritcualrly the development of the capacity for scientific research in this case. Whereas, regarding the language teaching and learning, specifically refers to the English proficiency in this study, the affordances remain unclear due to a lack of pre- and post-tests targeting English language competence in the curriculum design of the focal course. Given this, the research infers that it is pivotal to be critical of transalnguaging in terms of linguistic development and curriculum design targeting language teaching and learning for CLIL programs. Theoretically, the study will provide new empirical evidence that contributes to the understanding of translanguaging in CLIL classrooms. Pedagogically, the findings

will have implications for online teaching and learning in Chinese-English bilingual adult learners. Future research should investigate the in a larger sample size.

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