Composing Across Modes: An Empirical Investigation into Chinese EFL Learners' Digital Multimodal Composing Practice

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Abstract. By adopting a mixed research method, this study made a preliminary investigation into the DMC (digital multimodal composing) practice in China's EFL (English as a foreign language) teaching. An intact class of 35 students participated in the teaching experiment and completed five DMC tasks. Due to space restrictions, this article reported on the results of only one task. Results show: 1) Students spent more time on the composing stage during the DMC process and focused more on idea generation and language issues; 2) The seven groups of students employed the "introduction+body+conclusion" structure and used different semiotic combinations to convey meaning; 3) The participants held generally positive attitudes towards DMC practices. Limitations and suggestions for future research are also mentioned at the very end of this article.

Keywords: EFL Learners; Digital Multimodal Composing; Composing Process; Learners' Perception; Structure of DMC Artifacts.

1. Introduction

Advances in information and communication technology have revolutionized language teaching and learning practices. This development has resulted in a large discrepancy between traditional in-school writing practices and out-of-school multi-modal experiences, such as watching videos, participating in interactive online games, and using WeChat, Weibo, Facebook, Twitter, and other social media for communication. In this context, writing has to be redefined as a digital multi-modal composing (abbreviated as DMC hereafter) process as the "written products" are no longer mono-modal but multimodal ensembles. In actual language learning contexts, a growing cohort of language learners are composing digital multimodal artifacts by combining texts, images, sounds, and other semiotic resources. Thus, DMC practices shift writing "from page to screen" [1] and provide writers with a multimodal representation of meaning construction. Kress refers to the DMC artifacts as complex semiotic entities composed of linguistic and non-linguistic meaning-making resources. Writing is no longer a process of expressing meaning by linguistic symbols alone but a complex "designing" process of multimodal meaning patterns that combine linguistic meaning, visual meaning, auditory meaning, gesture meaning, and spatial meaning. DMC regards language learners as active "designers" of meaning, emphasizing the development of learners' multimodal communicative competence [2].

DMC practice is generally believed to be able to boost language learners' learning autonomy and promote peer-to-peer collaboration, improve learners' English speaking and writing competencies and the ability to integrate various semiotic resources to construct meaning, and enable learners to contact real audiences, increase reader awareness and espouse creative motivation. It also shapes learners' different identities, bridges the gaps between learners' differences in writing experiences inside and outside the classrooms, raises learners' genre awareness, helps them clarify their writing purposes, and even engages learners in social issues. Given these merits, a large number of literacy education experts and policymakers have begun to incorporate DMC practices into writing syllabuses to meet learners' learning needs in the contemporary digital age and have them accommodate to a multimodal semiotic world.

2. Empirical Research on DMC

At present, scholarly interest in DMC has been growing, and researchers have zoomed in on numerous topics ranging from learners' composing process, perceptions of DMC, to the assessment of DMC artifacts.

Among the three major research agendas, the first explores learners' interactive patterns in the composing process and their meaning-making strategies (i.e., the changing identity of learners and teachers [3], how learners integrate various semiotic resources) [4], and learners' and teachers' investment in DMC [5, 6]. For example, Kim and Kang videotaped the interaction conducted by 60 Korean second-year high school students. They developed a scoring rubric for the interactive data to quantitatively analyze the topics mentioned by the participants in the preparation and creation stages of DMC. The quality of interaction was operated as the number of turns appearing in the video clips. It was found that the interactive topics mainly pertained to the contents of DMC artifacts [4]. Lei and Zhang adopted classroom observations, log tracking, and interviews to explore the identities of third-year English majors from a certain university in China's mainland. Results showed that in the composing process students self-identified multiple roles such as language learners, writers, designers of multimodal proposals, critics of various proposals, researchers of real-world problems, and learning collaborators inside and outside the classroom [7]. Based on Darwin and Norton's investment model [8], Jiang et al. reported an EFL teacher's investment in DMC teaching activities (i.e., teachers' time and energy investment in aiding learners' DMC practices). They explained it from three aspects: identity, capital, and ideology. It revealed that investment in DMC teaching practices was influenced by such factors as cultural capital (e.g., knowledge and skills), social capital (e.g., social networks expanded by participating in workshops to share teaching practices), and institutional perceptions (e.g., school administrators' and policymakers' stances on DMC) [9]. Jiang investigated the changes in EFL learners' investment in five DMC projects and reported three focal cases' investment patterns. As the findings revealed, the first participant repositioned himself from a resistant writer to an active creator, the second evolved from a test-oriented writer and textbook decoder to a multimodal designer, while the third participant's investment in English writing barely changed. It also found that via DMC practices, EFL learners recognized different identities and were reacquainted with high-stakes exam systems, which produced impacts on their investment in English learning [10].

Most studies have also probed into EFL learners' and teachers' perceptions of DMC [11, 12]. DePalma and Alexander found that 15 undergraduate and nine graduate students had difficulty anticipating the audience in the creation process, were unaware of how to effectively assemble semiotic resources to construct meaning, and faced challenges in adapting to new technologies and effectively collaborating with peers [11]. Tan and Matsuda pointed out that although nine teachers in a public school in the United States had a biased understanding of DMC, they generally had a positive attitude towards it, believing that students should develop the necessary DMC skills to adapt to an increasingly digital and multimodal world [12]. Most of Kim and Kang's participants thought that DMC practices were helpful for EFL learning. Some students' overall impressions of DMC practice, especially its effectiveness in meaning construction, were positive, but their attitudes towards the effect of DMC on improving English writing skills were mixed [4].

A paucity of studies have centered on the writing assessment and designed some rubrics to measure the quality of the composed "texts". Due to differences in DMC projects in existent research, various rating rubrics have been proposed. For example, taking the New London Group's multiliteracies as the theoretical basis, Hung et al. designed a detailed scoring scale for one DMC task (slides) of the course *Communication and Presentation* in Taiwan province. The scale consisted of five indicators: language design, visual design, schematic special effects design, auditory design, and spatial design. Each indicator was followed by 3 to 4 questions guiding reviewers to rate on a 5-point scale. The study also noted that the scoring criteria could be used to review various forms of DMC products [13]. Silseth and Gilje explored how DMC evaluation unfolded in classroom teacher-student interaction from the perspective of sociocultural theory and

whether there were differences in teachers' and students' stances on the constructs of DMC evaluation. The study required students to collaborate on producing commercials, teachers to provide necessary guidance and formative evaluation in students' creation process, and students to receive multiple teacher feedback until the task was completed. Results showed that teachers and students had different understandings of the standards for DMC evaluation [14].

Despite the increasing attention to DMC research in EFL teaching, multiple issues remain under-investigated. There is little research on Chinese EFL learners' composing process, their perceptions of this practice, and the structure of the DMC artifacts created by this cohort. On account of this, this article reports on a semester-long EFL teaching practice in the Chinese mainland, which engaged tertiary students in DMC projects. With these issues in mind, this study endeavored to answer the following research questions: 1) What do EFL learners do in the whole DMC process? 2) What characteristics do the DMC artifacts have? 3) How do EFL learners perceive the DMC practice?

3. The Present Study

3.1 The Setting and Participants

This study was conducted during the fall semester of the academic year 2021-2022 at a private tertiary school in a southwestern province of the Chinese mainland. Participants were 35 second-year English majors (8 males and 27 females) with an average age of 19.4 years old (ranging from 18.8 to 20.5, SD=0.8). Prior to this study, they had been learning English for more than ten years since Grade Three in primary school. None of the participants had ever been to English-speaking countries or learned English from those from English-speaking communities. None of them claimed to have ever completed DMC projects. When this study commenced, these participants were enrolled in *Integrated English III*, one of the most important compulsory courses for all English majors. As the course name shows, *Integrated English III* is a comprehensive and demanding course in which teachers give almost equal weight to learners' listening, speaking, reading, writing, and translating competencies. This course, undertaken by the first author, lasted for 16 teaching weeks with four periods weekly (45 minutes for each period). During this semester, the participants were required to complete five videos in groups (randomly divided into seven groups with five members in each group). The first three tasks required participants to work in groups and make a short video to introduce to foreigners the Peking Opera (Task 1), the Paper Cuttings (Task 2), and Chinese people's fight against the COVID-19 pandemic (Task 3). Tasks 4 and 5 asked participants to raise people's environmental awareness and call people's attention to cyberbullying. Due to space restrictions, this article only reports on the results of Task 3.

3.2 Data Collection and Analysis

This study involved three types of data: audio recordings of each group's creation process, products of each DMC task, and semi-structured interview results. The audio materials were analyzed to answer the first research question. Both authors of this article transcribed all the recorded data verbatim, categorized students' interaction process according to Norton's framework[29], and counted the number of interactive topics to show the characteristics of each group's discussion pattern in the DMC process. Both authors analyzed the five audios and all the DMC artifacts, focusing on the characteristics of these artifacts. The semi-structured interview mainly explored students' overall attitude towards DMC, self-efficacy in completing DMC projects (such as handling technology, adaptation to DMC practices, etc.), anxiety about and interest in the DMC process, and their adaptability to collaborative learning. Six students (two males and four females) participated in the interview (conducted in Mandarin Chinese), and all their names were pseudonyms.

4. Results and Discussion

4.1 Collaborative Process

We operationalized the collaborative DMC process as group members' interaction and coded the data based on the themes of their discussions (also referred to as DMC episodes in this article). The analysis of the group discussions (see Table 1) indicates that all the groups spent a very brief time on the planning phase (about 12-30 turns and approximately 6 minutes). The participants spent most of the time on video composing.

Table 1 Time Spent on Different Phases of DMC

Group Label	Total Time on Task (minutes: seconds)	Planning	Composing	Revision
1	89:43	5:33	78:23	5:47
2	97:57	6:49	87:44	3:24
3	85:35	5:47	78:57	0:55
4	79:43	5:31	72:55	1:17
5	84:33	5:56	75:45	2:52
6	87:27	5:42	78:43	3:02
7	86:52	6:21	79:51	0:40

Table 2 shows that the idea-generating activity consumed the most time, followed by a language-related activity, despite the variations in the amount of time spent by each group. Most groups spent as much time on generating ideas as on language. These findings are consistent with Cumming's findings. By employing think-aloud protocols to elicit what aspects of writing learners would pay attention to, Cumming found that learners paid the most attention to generating ideas followed by attention to language [15]. These results are also partially in line with Kim and Kang' findings that during the planning time, students mainly talked about the content of the video, with the overall storyline being the focus of the discussion. However, during the DMC phase, they produced more DMC episodes relevant to language issues, the second most frequent topic during DMC creation [4]. Likewise, the results of our study also echo Shin and Cimasko 's report that college ESL (English as a second language) learners prioritized linguistic mode above other modes. In particular, Shin and Cimasko found that among grammar, vocabulary, and mechanics, grammar was the most frequently addressed feature [16]. Table 2 also shows that students spent some time on the structure of the DMC artifacts and the selection of modes (i.e., textual, audio, visual modes, and so on). However, the time spent on these aspects was comparatively brief—presumably due to the less complex nature of these aspects.

Table 2 Time spent on the different activities of the task

Group Label	Generating ideas	Language	Structure	Selecting Modes	Other
1	35:33	24:27	10:24	10:09	9:10
2	38:57	34:23	12:36	10:27	1:34
3	32:25	30:42	10:27	9:33	2:28
4	27:46	27:34	11:36	9:57	2:50
5	24:21	30:33	12:17	8:44	8:38
6	32:27	31:24	8:25	8:39	6:32
7	31:21	32.33	8:54	7:37	6:27

The following two excerpts present the collaborative interactions among group members. Both excerpts were translated from mandarin Chinese into English. Excerpt 1 demonstrates how members of the first group made negotiations about idea generation.

*Wang: ... What kind of content should we put in the video? Do you have any **idea**?*

Hua: ..., I think we can add some official reports to make our video formal. ... This is a serious topic.

Gu: That's a good idea. Besides, we should also consider background music or something else.

Excerpt 2 shows the participants' (group 2) discussion on lexical choice.

*Gong: We should not repeatedly use the **word** "fight". Replace it with another one as we write an essay.*

Qin: Then, which word can replace it? I've no idea. Check it up with Youdao?

Bao: ... Let me see. Oh, "combat" is a good choice.

4.2 Patterns of DMC Products

We find that the mean length of the seven videos is 185.10 seconds (minimum: 127.32 seconds, maximum: 201.74 seconds). These videos share a common structure, including an introduction (background information), a body part (detailed storyline), and a conclusion (eulogizing those fighting against the COVID-19 pandemic). This suggests that these Chinese EFL learners have common thoughts in terms of this topic and that they transfer English writing skills acquired in regular classes to DMC tasks.

The analysis of the DMC products reveals that students assembled various semiotic resources to convey meaning, including linguistic/textual, visual/graphical, audio, and audiovisual resources. Each group employed a different combination of these resources. We find five patterns among the seven groups: 1) English text + pictures + recorded video(s); 2) English text + pictures & emojis + downloaded videos; 3) Chinese & English texts + recorded videos + downloaded videos + pictures; 4) English + pictures + monologues + sound tracks; 5) Chinese & English + pictures + recorded interview (telling stories from a third person perspective). Despite the differences in choosing meaning-construction resources, these patterns can perform similar functions.

4.3 Perceptions of DMC Practices

Generally speaking, all the participants expressed positive attitudes towards DMC practices, believing that this form of writing afforded them novel experience and revolutionized traditional in-class English writing. They considered DMC to be a beneficial tool for learning English as it potentially transforms a tedious learning process into an interesting one:

*Gong: ... DMC is a **brand-new experience** which requires **comprehensive English skills** and **competence in using technology**. Plus, it is a more **appealing** learning activity and **improves** my English.*

However, faced with new technology, half of them felt a certain level of anxiety about completing DMC projects despite their genuine interest in these tasks:

*Du: At the very beginning, I didn't know how to make a video via software, although I love watching videos in my spare time. So, when the first task was assigned, I became a little bit **anxious** and **nervous**.*

Finally, all the students valued the collaborative activities during the composing process, holding that they could benefit substantially from the knowledge and expertise of their peers. As Lv said:

*Lv: As the Chinese proverbs go, "Many hands make light work". When **collaborating** with peer students, we will **complete the tasks more perfectly** and **learn much from each other**.*

This has implications for future EFL teaching instruction. To truly prepare students for collaborative writing, EFL teachers should re-conceptualize in-class teaching and assessment practices.

5. Conclusion

The current study empirically investigated the implementation of DMC projects in EFL teaching. We find that while completing the DMC tasks, EFL learners spent more time on video creation and focused more on idea generation and language issues. Moreover, all seven groups adopted a similar structure to make videos but assembled different semiotic resources to construct meaning. Finally, we find that students held positive perceptions of DMC practices in tertiary EFL teaching. Special mention should be made that this is only a preliminary examination with some limitations. For

example, the sample size is small, undermining the generalizability of the research results. Additionally, this study addressed only three research questions, and many important issues remain unresolved. Future research can take these factors into full account.

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