THE DEVELOPMENT OF A SOCIAL MEDIA

COLLABORATIVE DISCUSSION MODEL FOR

GRAMMATICAL ERROR REDUCTION IN ENGLISH

AS A FOREIGN LANGUAGE UNIVERSITY

STUDENTS' WRITING

Somchai Watcharapunyawong

A Thesis Submitted in Partial Fulfillment of the Requirements for

the Degree of Doctor of Philosophy in English Language Studies

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การพัฒนาต้นแบบการเรียนรู้แบบมีส่วนร่วมโดยการอภิปรายผ่านเครือข่าย
สังคมออนไลน์ เพื่อลดความผิดพลาดทางไวยากรณ์ในงานเขียนภาษาอังกฤษ
ของนักศึกษามหาวิทยาลัยที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศ

นายสมชาย วัชรปัญญาวงศ์

THE DEVELOPMENT OF A SOCIAL MEDIA COLLABORATIVE DISCUSSION MODEL FOR GRAMMATICAL ERROR REDUCTION IN ENGLISH AS A FOREIGN LANGUAGE UNIVERSITY STUDENTS' WRITING

Suranaree University of Technology has approved this thesis submitted in partial fulfillment of the requirements for the Degree of Doctor of Philosophy.

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สมชาย วัชรปัญญาวงศ์ : การพัฒนาต้นแบบการเรียนรู้แบบมีส่วนร่วมโดยการอภิปรายผ่าน
เครือข่ายสังคมออนไลน์ เพื่อลดความผิดพลาดทางไวยากรณ์ในงานเขียนภาษาอังกฤษของ
นักศึกษามหาวิทยาลัยที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศ (THE DEVELOPMENT
OF A SOCIAL MEDIA COLLABORATIVE DISCUSSION MODEL FOR
GRAMMATICAL ERROR REDUCTION IN ENGLISH AS A FOREIGN LANGUAGE
UNIVERSITY STUDENTS' WRITING) อาจารย์ที่ปรึกษา : ผู้ช่วยศาสตราจารย์
ดร.ศิริลักษณ์ อุสาหะ, 276 หน้า.

งานวิจัยเรื่องนี้มีวัตถุประสงค์เพื่อ (1) พัฒนาต้นแบบการเรียนรู้แบบมีส่วนร่วมโดยการ
อภิปรายผ่านเครือข่ายสังคมออนไลน์เพื่อลดความผิดพลาดทางไวยากรณ์ ในงานเขียนภาษาอังกฤษ
ของนักศึกษามหาวิทยาลัย (2) หาข้อผิดพลาดทางไวยากรณ์ในงานเขียนของนักศึกษา (3) ศึกษาผล
การใช้ต้นแบบการเรียนรู้แบบมีส่วนร่วมโดยการอภิปรายผ่านเครือข่ายสังคมออนไลน์ ในการลด
ความผิดพลาดทางไวยากรณ์ ในงานเขียนของนักศึกษา และ (4) ศึกษาเจตคติของนักศึกษาที่มีต่อ
ต้นแบบการเรียนรู้แบบมีส่วนร่วมโดยการอภิปรายผ่านเครือข่ายสังคมออนไลน์

ในงานวิจัยนี้ การสร้างต้นแบบการเรียนรู้แบบมีส่วนร่วมโดยการอภิปรายผ่านเครือข่าย
สังคมออนไลน์ ได้ยึดตามหลักการพัฒนาต้นแบบการเรียนรู้ 7 ขั้น ของศาสตราจารย์ ดร.ชัยยงค์
พรหมวงศ์ ประชากรที่ใช้ในงานวิจัยนี้ได้แก่นักศึกษาสาขาวิชาภาษาอังกฤษชั้นปีที่ 2 จำนวน 35
คน ที่ลงทะเบียนรายวิชา กลวิธีการเขียนภาษาอังกฤษ ในภาคเรียนที่ 2 ปีการศึกษา 2554 ประเภท
ความผิดทางไวยากรณ์จากงานเขียน วิเคราะห์จากงานเขียนก่อนเรียนของนักศึกษา ส่วนผลที่ได้จาก
การนำต้นแบบการเรียนรู้แบบมีส่วนร่วมโดยการอภิปรายผ่านเครือข่ายสังคมออนไลน์ ไปใช้เพื่อ
ลดความผิดพลาดทางไวยากรณ์ในงานเขียนนั้น ได้จากการเปรียบเทียบค่าเฉลี่ยของจำนวนความ
ผิดพลาดจากงานเขียนก่อนเรียนและหลังเรียนของนักศึกษา การเขียนบันทึกความรู้ และ จากการ
แก้ไขงานเขียนครั้งที่ 1 และ 2 ในด้านเจตคติที่มีต่อต้นแบบการเรียนรู้แบบมีส่วนร่วมโดยการ
อภิปรายผ่านเครือข่ายสังคมออนไลน์ ได้จากแบบสอบถามและการสัมภาษณ์นักศึกษาเพื่อดูความ
พึงพอใจที่มีต่อต้นแบบการเรียนรู้แบบมีส่วนร่วมโดยการอภิปรายผ่านเครือข่ายสังคมออนไลน์

ผลการวิจัยพบว่า

1. ต้นแบบการเรียนรู้แบบมีส่วนร่วมโดยการอภิปรายผ่านเครือข่ายสังคมออนไลน์
ส่วนประกอบหลักที่ใช้ในต้นแบบการเรียนรู้ ผู้เชี่ยวชาญ 3 ท่านได้ตรวจสอบความเหมาะสมและ
พบว่า ความสัมพันธ์ของส่วนประกอบต่างๆ ของต้นแบบนั้นมีความเหมาะสมอย่างยิ่งในการที่จะ
นำไปใช้ทดลองกับสถานการณ์จริง ($\bar{x}$ = 4.58, SD = .235)

2. ประเภทความผิดพลาดทางไวยากรณ์ที่พบจากงานเขียนทั้ง 3 ชนิด (การเขียนเล่าเรื่อง การเขียนเชิงบรรยาย และ การเขียนเชิงเปรียบเทียบ) ได้แก่ การใช้คำนำหน้านาม การใช้กาล การเลือกใช้คำ โครงสร้างประโยค รูปคำนามเอกพจน์และพหูพจน์ คำบุพบท กริยาช่วย รูปกริยา การใช้กริยาให้สอดคล้องกับประธาน ประโยคที่ประกอบด้วยสองอนุประโยคขึ้นไปขาดเครื่องหมายวรรคตอนหรือคำสันธาน การใช้คำสรรพนาม ประโยคไม่สมบูรณ์ กริยาแท้และกริยาเติม ing การใช้คำเชื่อมความ โครงสร้างของประโยคที่สอดคล้องกัน และโครงสร้างการเปรียบเทียบ ตามลำดับ

3. ผลจากการนำต้นแบบการเรียนรู้แบบมีส่วนร่วมโดยการอภิปรายผ่านเครือข่ายสังคมออนไลน์ ไปใช้ลดความผิดพลาดทางไวยากรณ์ ในงานเขียนนักศึกษาพบว่า ความผิดพลาดทางไวยากรณ์ในการเขียนจากแบบทดสอบหลังเรียนทั้ง 3 ชนิดงานเขียน ลดลงอย่างมีนัยสำคัญที่ระดับ .000 ส่วนข้อมูลที่ได้จากบันทึกความรู้และการแก้ไขงานครั้งที่ 1 และ 2 แสดงถึงการพัฒนาความสามารถทางการเขียนในด้านไวยากรณ์ของผู้เรียนอย่างเห็นได้ชัด

4. เจตคติของนักศึกษาที่มีต่อต้นแบบการเรียนรู้แบบมีส่วนร่วมโดยการอภิปรายผ่านเครือข่ายสังคมออนไลน์ เป็นไปในเชิงบวก โดยนักศึกษาเห็นด้วยว่า กระบวนการเรียนรู้แบบมีส่วนร่วมโดยการอภิปราย ($\bar{x}$ = 4.29, SD = .83), เฟสบุ๊ค ($\bar{x}$ = 4.26, SD = .65) และงานออนไลน์ที่มอบหมาย ($\bar{x}$ = 4.54, SD = .70) มีความเหมาะสมและสามารถช่วยพัฒนาความสามารถทางการเขียนในด้านไวยากรณ์ได้จริง ผลจากการสัมภาษณ์นักศึกษาพบว่าการเรียนรู้แบบมีส่วนร่วมโดยการอภิปรายผ่านเครือข่ายสังคมออนไลน์มีความน่าสนใจ ยืดหยุ่นในด้านเวลาและสถานที่ สนุก และจูงใจในการเรียน

สาขาวิชาภาษาต่างประเทศ   ลายมือชื่อนักศึกษา_____

ปีการศึกษา 2556   ลายมือชื่ออาจารย์ที่ปรึกษา_____

SOMCHAI WATCHARAPUNYAWONG : THE DEVELOPMENT OF A
SOCIAL MEDIA COLLABORATIVE DISCUSSION MODEL FOR
GRAMMATICAL ERROR REDUCTION IN ENGLISH AS A FOREIGN
LANGUAGE UNIVERSITY STUDENTS' WRITING. THESIS ADVISOR :
ASST. PROF. SIRILUCK USAHA, Ph.D., 276 PP.

GRAMMATICAL ERROR REDUCTION/L2 WRITING/SOCIAL MEDIA/
ONLINE COLLABORATIVE DISCUSSION

The purposes of this study were (1) to develop a model of Social Media
Collaborative Discussion (the SMCD Model) for the reduction of grammatical errors
in EFL university students' writing, (2) to identify the grammatical error categories
from students' English writing, (3) to examine the effects of the SMCD Model on the
reduction of grammatical errors in students' English writing, and (4) to investigate the
students' perspectives on the SMCD Model.

In this study, the SMCD Model, to be referred to as the Somchai SMCD
Model, was created systematically according to the Brahmawong's Seven-Step Model
for R&D Prototype Development. The participants were 35 second-year English
major students, registered for a writing course, Writing Strategies in English, in
semester 2, academic year 2011. The categories of grammatical errors were identified
from these students' pre-tests, and the effects of the SMCD Model on the reduction of
grammatical errors in L2 writing were examined from a comparison of error
frequency in their pre- and post-tests, diaries, and the analysis of Revisions 1 & 2.

To investigate the students' perspectives, questionnaires and semi-structured interviews were employed to see their levels of satisfaction.

The results were as follows:

1. The components used in the SMCD Model was rated as highly appropriate ($\bar{x}$ = 4.58, SD = .235) for the implementation in an actual setting by the three experts.

2. The categories of grammatical errors found from the three writing genres, namely narration, description, and comparison/contrast, were article, verb tense, word choice, sentence structure, singular/plural form, preposition, modal/auxiliary, verb form, subject-verb agreement, run-on sentence, pronoun, fragment, infinitive/gerund, transition, parallel structure, and comparison structure, respectively.

3. The effects of the SMCD Model were apparently positive. Based on the data analyses of pre- and post-tests, diaries, and Revisions 1&2, the errors in the students' post-tests in all the three writing genres were significantly reduced at the .000 level of significance. In addition, the evidence of grammatical improvement was clearly seen in their diary entries and revisions.

4. With regards to the students' perspectives on the SMCD Model, the participants agreed that the OCD process ($\bar{x}$ = 4.29, SD = .83), Facebook ($\bar{x}$ = 4.26, SD = .65), and the online tasks ($\bar{x}$ = 4.54, SD = .70) were appropriate and helped to enhance their writing accuracy. The interviews revealed that the students found the SMCD Model interesting, flexible in terms of time and places, fun, and motivating.

School of Foreign Languages   Student's Signature_____

Academic Year 2013   Advisor's Signature_____

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Somchai Watcharapunyawong

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LIST OF ABBREVIATIONS

OCD	=	Online Collaborative Discussion
SMCD	=	Social Media Collaborative Discussion
L2	=	Second Language
L1	=	First Language
EFL	=	English as a Foreign Language
ESL	=	English as a Second Language
TL	=	Target Language
SLA	=	Second Language Acquisition
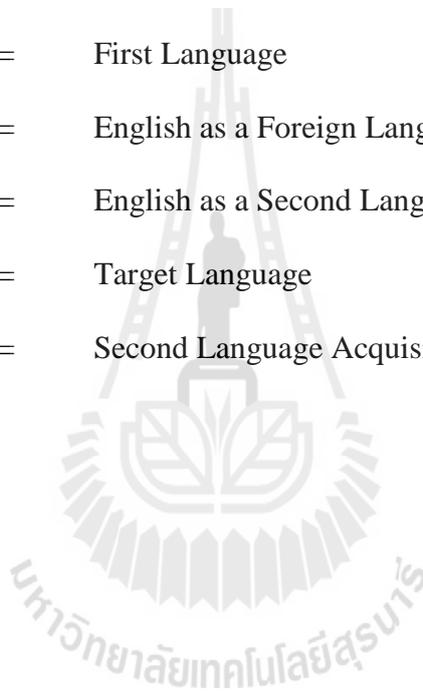
CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Of the four English skills, writing, in particular, has been found to be the most difficult for EFL learners to master. This is especially a concern in those Thai universities where English is mainly taught as a compulsory subject, since writing in a second language requires both syntactic and semantic knowledge. Weigle (2002) points out, "The process of text generation, or encoding internal representations (ideas) into written texts, may be disrupted by the need for lengthy searches for appropriate lexical and syntactic choices" (p. 36). Clearly understood, the insufficiency of linguistic knowledge or limited language competence has negative impact on writing proficiency as well as L2 writing quality.

Even though writing is perceived to be the hardest skill to acquire, it is becoming more demanding in an age in which a great deal of communication is done in written forms, such as email and other text-based technologies. Santos (2000) explains that there are three reasons making writing increasingly essential: 1) more international linguists are promoting writing as their field of specialization; 2) more articles and journals are being published in English; and 3) more international students are pursuing their degrees in English speaking countries. Besides, Chen (2007) states that owing to the movement towards globalization, the world seems to be smaller because of the perception of unlimited communication. For these reasons,

the members of global institutions, for their own benefits in terms of education and business cooperation, need to stay connected with one another, and most often in writing. In order to comprehensibly express thoughts and opinions, apart from oral interaction, writing is considered crucial. On account of its importance, many colleges and universities thus offer more writing courses, for example, Writing for Specific Purposes, Academic Writing, Paragraph Writing, and so forth in order to improve students' writing.

As mentioned earlier, this has become an increasingly significant phenomenon in academic areas. Furthermore, Silva (2000) notes that a number of second language writing specialists are very much required due to the increasing demands of English writing courses. From Silva's notion, a question like "Why are so many L2 writing specialists needed?" may be raised. The clear answer is that, among the four language skills, writing has been perceived as the most difficult to teach as well as to learn in that a writing teacher has to devote considerably more time, energy, and expertise in order to help a group of student writers effectively develop their skills. It is clear that teaching writing is not a simple task because a variety of writing competences, comprising grammatical structures, organization, vocabulary, ability to give feedback, and appropriate assessment of students' written works, is highly required as Matsuda (2000, p.16) asserts:

> When the responsibility of teaching L2 writing shifted from composition studies to L2 studies in the late 1950s and the early 1960s, however, some L2 specialists came to realize that what they knew about language and language teaching was not enough to prepare L2 students for writing in academic contexts.

As mentioned above, if the teaching of writing is a demanding task, how is it going to be for such learners, especially for those whose first language is not English?

In the Thai educational contexts, the importance of writing has been realized since many universities provide writing courses, as both elective and compulsory subjects. To clearly illustrate, according to the curricula of Thepsatri Rajabhat University, where the researcher of this study is employed, English major students have to pass four English writing courses in order to graduate: Paragraph Writing, Writing for Specific Purposes, Writing Strategies in English, and Creative Writing. Yet, the students' writing ability is still far from satisfactory. In an attempt to help Thai EFL learners improve their writing skills, many research studies have been conducted. For example, some studies focus on writing problem identification so as to categorize error types frequently made by student writers at both sentence and paragraph levels (Sattayatham & Honsa, 2007; Sattayatham & Ratanapinyowong, 2008; Jenwitheesuk, 2009), while others emphasize particular approaches that assist L2 writers to increase their writing accuracy, many of which are related to teacher feedback and peer revisions (Torwong, 2003; Kaweera & Usaha, 2007; Wang & Usaha, 2009). To become effective writers, students have to devote a great deal of time and effort to continuously practice writing, which can make them feel discouraged and finally give up on achieving their writing objectives. Meanwhile, writing teachers often suffer from the greater workload of reading and correcting the paragraphs and essays produced by students. This is thus a genuine complex of problems that needs to be addressed.

The following piece of writing taken from a student's paragraph illustrates the challenge of comprehensibility:

> To travel to Chanthaburi with a teacher and friends, First, go sightseeing aquatic animals museum at the King Ka Ben, there are a lot of aquatic animals various kinds such as anemone fish, whale, shark, Siamese tiger fish and ray. Second, lists the narrate and the method grows mangrove forest and get see animals in the mangrove forest such as mudskipper, meder' mangrove crab and blue swimming crab. Finally, have a swim with friend in the sea at the Chao Lao beach. In the evening have a meal dinner and have the singing play and dance merrily. This travel is the travel that remember most because , be the travel has that to travel with my friends before ends high school and the travel that is advantages and learn the news know, be good travel and impress for I. *(A paragraph on "My memorable trip" written by a college student)*

From the above paragraph, a lot of misuses of vocabulary and grammatical structures can be seen, all of which make the story difficult to follow. In terms of organization, the student seemed to understand how to use transitional markers like first, second, and finally to organize her thoughts. However, her problems included syntactic structures, failure to use simple past tense verbs, a lack of pluralizers for plural nouns, subject omission, direct translation from L1, and the misuse of pronouns, for instance. It was apparent that she transferred her L1 syntactic properties in her L2 writing, which caused many such grammatical errors. That is to say, the mother tongue, at times, interfered with the student's L2 writing, which reduced her writing effectiveness.

1.2 Statements of the Problems

Since the cause of ineffective writing is dominantly from grammatical errors, it has therefore become an issue, in which a number of language educators have been interested. As can be seen, a great amount of research in relation to syntactic errors in different writing contexts has been particularly conducted.

Bhela (1999) investigated grammatical errors in L2 writing. The selected participants were four students: speakers of Spanish, Vietnamese, Cambodian and Italian. These four students were asked to write stories according to the prepared pictures. The findings indicated that the learners, due to their L1 influence, produced ineffective written stories with inappropriate structures. All the four participants made use of L1 syntactic properties and related them to L2 structures, which caused errors in some extents and eventually led to the gap between L1 and L2 linguistic features.

Camilleri (2004) studied the issue of L1 transfer in Maltese students' English writing. A hundred essays written by particularly selected participants were examined in order to detect errors caused by L1 interference, based on five stages of investigation comprising data collection, error identification, error description, attribution of error categories, and reflections on the findings. The errors most frequently made by the students were classified into 13 categories, consisting of noun, adverb, verb, adjective, verb form, preposition, article, spelling, concord, idiom, pronoun, passive voice, and word order. The causes of errors found in L2 writing were mainly from the interference of L1 in relation to direct translation, differences of syntactic properties between L1 and L2, and the transfer of L1 systems in L2 writing.

Hyland and Anan (2006) examined teachers' perceptions of errors caused by L1 interference in L2 writing. Sixteen participants were divided into three groups: native English speaking teachers, Japanese speaking teachers, and native English speaking non-teachers. They were asked to correct a text written by a Japanese college student in order to see what types of writing problems were considered the most severe. The results revealed that the native Japanese speaking teachers put greatest emphasis on grammatical structures in the student's writing. They regarded

the violation of the syntactic rules as errors because in reality, these students would at times employ the rules of the Japanese language when writing, which caused a number of errors. As a result, the interference of the mother tongue was seen by the Japanese teachers as a crucial factor requiring urgent correction. On the other hand, the native English speaking teachers emphasized formality and appropriateness of academic competency. It was also explained that due to the different experiences between the two groups of participants, the Japanese teachers viewed grammatical accuracy as an initially essential aspect that made a good piece of writing.

Similarly, Maros et al. (2007) investigated grammatical errors made by Malaysian students. The participants from six different schools were asked to write essays, which were used as data for analyzing errors. The findings showed that Malaysian student writers encountered difficulty in terms of grammar when writing in English. The error types caused by L1 interference, according to the study, were the use of articles, subject-verb agreement, and copula 'be'. The researchers concluded that the major writing problem of Malaysian students derived from the influence of the mother tongue; consequently, in their perspectives, a study on reducing such interference should be pursued, which could be done in relation to the development of teaching materials or teaching approaches that are appropriate to be used in that particular writing course.

In addition, Abushihub et al. (2011) examined grammatical errors in the writing of 62 students from Jordan registered for a Paragraph Writing course. The errors were categorized into six major categories: tenses, prepositions, articles, active and passive voice, verbs, and morphological errors. The two most frequently made error types were prepositions and morphological errors related to the use of words and

word forms. The researchers pointed out that in order to reduce errors in L2 writing, the development of teaching pedagogies, textbooks, and syllabus designs should be taken into consideration.

On the whole, with regards to some studies as illustrated, it is apparent that grammatical errors have been seen as an unavoidable obstacle that all EFL and ESL student writers have to encounter, resulting in transitionally ineffective L2 writing. As a result, for decades, it has become a compelling issue that many language researchers have studied in order to find out what approaches and methods can really assist L2 writers to overcome this difficulty.

In Thailand, grammatical errors are also a major focus of many research studies conducted by Thai language researchers. Sattayatham and Honsa (2007) examined writing and translation errors made by first year medical students. The participants were asked to translate and write paragraphs in English, and the completed tasks were analyzed so as to identify the ten most frequent errors. These were, in order of prominence, wrong choice of vocabulary, articles, wrong plural form, wrong use of "to be", conditional sentences, punctuation, connectors, fragments, subject-verb agreement, spelling mistakes, and omission of subject, respectively. According to the study results, it was concluded that the students made such errors when translating and writing in English because they were dependent on the systems of the Thai language, whose interference caused errors, related to syntactic and semantic properties.

Jenwitheesuk (2009) investigated the causes of L2 writing errors in third-year college students' written works. The study revealed that most errors were mainly due to a lack of syntactic knowledge. The four most frequent errors found were

determiners, subject and verb agreement, tenses, and prepositions. It was thus explained that due to their limited grammatical and lexical competence, the students relied on their first language systems and transferred them into L2 writing. She specified, "the persisted errors in writing were the results from mother tongue interference, false hypotheses and ignorance of the correct sentence patterns of English structures, together with the lack of knowledge of grammatical rules" (p. 982).

Interestingly, even though there have been studies on syntactic errors in university students' English writing, there has been no research into comparing the types of errors in different writing genres, and also conducted with undergraduate students at Thepsatri Rajabhat University. Therefore, this study focused on the identification of English writing errors found in three different writing genres (narrative, descriptive, and comparison/contrast) in order to test the claims that each genre engendered particular types of errors, and consequently that when teaching students to write English paragraphs, a teacher had to consider the types of errors, expected to be made, according to each genre. To do this, an appropriate emphasis can be put on the right grammatical structures during the process of writing revision, which helps student writers enhance their writing accuracy.

1.3 Rationale of the Study

In addition to the studies on error types found in L2 writing, the reduction of grammatical errors is also necessary. In order to create a good paragraph with few language flaws, Halliday and Hasan (1976) state that the five essential cohesive devices, namely reference, substitution, ellipsis, conjunctions, and lexicon cohesion,

should be taken into account. Hyland (2003, p. 4) also asserts that language structures are perceived as a crucial factor that helps produce an acceptable piece of writing. Furthermore, he also proposes a means to enhance these language structures for effective writing as follows:

1) Familiarization: Learners are taught certain grammar and vocabulary, usually through a text.
2) Controlled writing: Learners manipulate fixed patterns, often from substitution tables.
3) Guided writing: Learners imitate model texts.
4) Free writing: Learners use the patterns they have developed to write an essay, letter, and so forth.

Indeed, there are some factors leading to the effectiveness of writing such as idea generation, paragraph organization, and so on. The language or grammar is also perceived as one of the crucial factors that should not be ignored. As a result, grammatical structures are taught along with the teaching of writing. Hyland (2003) explains, "accuracy and clear exposition are considered the main criteria of good writing" (p. 4). Furthermore, Hyland (2007) urges that the study of grammar can be counted as a component of a writing class. Briefly, grammar and vocabulary should be taught together with the writing process due to the fact that when a learner acquires more syntactic rules, he/she will not make use of such restrictions from the L1 systems in his/her L2 writing; as a result, the reduction of grammatical errors can be certainly expected.

In order to make student writers aware of errors by themselves, Lundstrom and Baker (2009) examined the effectiveness of learning between the students who performed their roles as givers and the ones who were only receivers in terms of writing revision throughout a semester. The results revealed that the ones sharing and offering comments on written works developed their writing abilities more

significantly than those only receiving assistance from peers. In accordance with Lundstrom and Baker, it is reasonable to say that the interaction among peers in order to share and exchange comments does encourage the power of knowledge construction, which is seen as a learner-centered approach, based upon the theories of social constructivism and collaboration. Dewey (1966) asserts that the interaction makes learners engage in a learning environment, where they can help one another construct new knowledge. All in all, the collaboration is considered as a valuable approach that assists student writers to learn more about syntactic properties as in the writing setting, they can help one another complete a specially designed task provided by the teacher. Shafie et al. (2010) support that for a successful collaborative discussion in an academic writing class, in addition to writing, negotiation skill is also required in order to get each learner to collaboratively work harmoniously with no conflicts. With this, they certainly acquire knowledge, which is constructed by the learners themselves. This approach is perceived much better than the teacher-centered method.

More interestingly, owing to the digital era, the Internet has played a major role in an individual's life. In particular, the forms of education have also changed from conventional to unconventional classrooms; that is, through the technological devices like online networking websites, cell phones and so on, learners can study anywhere and anytime. That is, online interaction and collaboration can be independently performed outside the traditional classrooms. Hrastinski (2009) says that because of today's technological applications, both teachers and students have become more closely connected with each other, which promotes their collaborative discussion in relation to the educational matters. In addition, such new technologies,

including the Web 2.0 applications, have affected the teaching of writing as the opportunities of interactions are provided (Kuo, 2008). On account of the advantages of the online technologies as mentioned, again, a number of writing researchers have conducted their studies on using online technologies such as email services, social networks, blogs, forums, etc. to enhance EFL students' writing proficiency.

Wang and Usaha (2009) studied the effects of electronic peer response in comparison with face-to-face peer response. The participants were 40 Chinese college students, divided into two groups for a training session on peer response methods, one trained to give face-to-face responses, and the other trained to give feedback through electronic applications. The participants in both groups were assigned to write argumentative, narrative, descriptive, and expository essays and revise their written works after receiving comments from discussion sessions. Comments made by the participants were then analyzed. The results showed that the comments made by the face-to-face group were most significant in terms of vocabulary and contents, while the comments from the electronic peer response group helped with regards to contents and essay organization. In brief, it is reasonable to say that technology could encourage student writers collaboratively work online and break the boundary of time and distance, which is considered comfortable and convenient in this recent world.

As this and many other studies demonstrate, technologies have played a crucial role in the teaching of writing in EFL/ESL contexts as they provide innovative ways for student writers to improve their writing skills in terms of language fluency and accuracy. Particularly, in the world of globalization, such up-to-date communicative technologies definitely break the convention of communicative process, business connections or even the teaching management in schools and

colleges. As a result, social network and other digital technologies have become a research focus, in which a number of academic scholars are interested.

In Hewett's (2006) study, an electronic whiteboard was used for an online synchronous conference in a writing class. The participants gave their contributions on a writing task via this online space in terms of idea generation and writing revision. The study revealed that the changes of revisions and writing performance were apparent from the students' discussion and collaborative interaction. This prompted the researcher to confirm that synchronous conferences through online platforms could significantly affect students' writing enhancement in terms of contents, organization as well as syntactic features. However, one main limitation the author found in using an electronic whiteboard is that the student writers are forced to communicate synchronously only, while in practice, they should be given more freedom to do the tasks anywhere or anytime.

Furthermore, Lundin (2008) examined the use of wikis, one example of social networking sites, in a composition class based on a proposed networked pedagogy as a new alternative means for the teaching of writing. The study showed that the use of wikis facilitated the four assumptions of this particular writing course, including new media composition, collaborative writing, critical interaction, and online authority. Additionally, the author pointed out that using wikis or online social networks was considered as a new innovation in approaches to the teaching of writing in that the use of wikis encouraged students' writing effectiveness pertaining to both content and the language properties themselves.

Mak and Coniam (2008) also conducted a study on using wikis to improve students' writing skills. The focus was on how to employ wikis as a communicative

medium between authors and audiences in order to edit and revise the written papers in terms of content, organization, and language. The students' writing quality, after the experiment, was significantly developed; moreover, their writing accuracy in terms of syntactic and semantic properties was considerably increased. It means that wikis did encourage the writing potential of student writers as they promoted genuine writing practices and authentic discussions among partners. In short, these technological media have been preparing new spaces for collaboration, discussion, and communication, considered beneficial to a wide range of learning activities. Nonetheless, compared to other social networks, wikis are still limited in terms of their functions, whereas MySpace, Facebook, or Twitter can be more functional as these social networks provide users with email services, bulletins, blogs, synchronous and asynchronous communication. To make online collaborative discussion more effective, the aforementioned social networks should be considered as media for the teaching of writing.

While much research has recently been conducted on the implementation of online technologies in writing classes overall, few of these studies have focused on the reduction of grammatical errors in EFL students' writing. In order to bridge the aforementioned gaps, the present study entitled "Development of a Social Media Collaborative Discussion Model for Grammatical Error Reduction in English as a Foreign Language University Students' Writing" was therefore conducted.

1.4 Purposes of the Study

There are four principal purposes of this study.

1) To develop a social media collaborative discussion model.

2) To categorize grammatical errors from the three types of writing genres, namely narration, description and comparison/contrast.

3) To examine the effects of using a social media collaborative discussion model in order to reduce grammatical errors in students' writing.

4) To ascertain the students' perspectives on a social media collaborative discussion model.

1.5 Research Questions

This study was conducted in order to answer the following research questions:

1. What are the components in developing a model of Social Media Collaborative Discussion (SMCD) for the reduction of grammatical errors in EFL university students' writing?

2. What are the grammatical error categories identified from the three types of genres, namely narration, description, and comparison/contrast?

3. What are the effects of the SMCD Model on the reduction of grammatical errors in EFL students' writing?

4. What are the students' perspectives towards the SMCD Model?

1.6 Significance of the Study

Obviously, grammatical errors have, for ages, been perceived as a major problem for all people learning to write in an additional language due to the fact that each language is not alike in terms of syntactic and lexical properties. It is therefore necessary for language educators to know what sorts of error types exist in students' language performance. Before one can devise an appropriate solution, it is essential to know the nature of the particular problem. One significant goal of this study is to provide an identification of grammatical error categories analyzed from students' narrative, descriptive, and comparison/contrast writing, all within a Thai EFL context. This goal will be beneficial to Thai writing teachers, since the types of errors are also presented along with discussions.

Apart from the significance of the error categories as just stated, based on the two learning theories, comprising social constructivism and collaboration, and the use of online technologies enhanced language learning, a model of Social Media Collaborative Discussion (The SMCD Model) was systematically created. After the model had been implemented, the effects of online collaborative discussion via Facebook on the reduction of grammatical errors in EFL students' writing were intensively examined. The findings then could be used as guidance for writing teachers as well as language researchers who are interested in the areas of technology enhanced language learning.

Lastly, the students' perspectives towards the Social Media Collaborative Discussion Model via Facebook were investigated in order to elicit their reflections and perceived levels of satisfaction after the model implementation. Most importantly, the findings could be used as suggestions to develop teaching and learning styles

through social media technologies as well as to adapt this proposed model to be suitable for an EFL learning environment/context.

1.7 Definitions of Key Terms

1. **Error** refers to "a noticeable deviation from the adult grammar of a native speaker, reflecting the interlanguage competence of the learner" (Petter, 2000, p. 6).

2. **L1 interference** is defined as a cross-linguistic or language transfer, referred to the interference of the mother tongue, when learners perform their language performance in either spoken or written forms (Hashim, 1999).

3. **Online learning** is in relation to a learning method that aims at using technologies like online social networks, email, blogs, etc. as a means to communicate with others synchronously or asynchronously for the educational purposes.

4. **Web 2.0** is a new technological application on the Internet, including "social networking, wikis, folksonomies, virtual societies and blogging" (Selwyn, 2008, p. 4)

5. **Facebook** is currently the most famous social networking website that provides users with multifunctional usage such as platforms for posting comments and personal profiles, blogs, email services, notes, for instance.

6. **The Somchai SMCD Model** is an online collaborative discussion model systematically created to help students reduce grammatical errors in L2 writing.

1.8 Scope and Limitations of the Study

As this research was conducted in a particular context, the limitations must necessarily be stated in order to prevent the overgeneralization of the study results.

1. The subjects of this study were second-year English major undergraduate students registered for the writing course of *Writing Strategies in English* at Thepsatri Rajabhat University, Lop Buri, Thailand in the academic year of 2011; therefore, the results may not be generalized for a boarder context.

2. This study aimed at identifying grammatical errors from only three writing genres, namely narration, description and comparison/contrast.

3. Indeed, this study employed a social network as a medium of online collaborative discussion. Nonetheless, there are a great number of social networks nowadays. Therefore, this research employed Facebook as a social networking tool for online collaborative discussion; the employment of other platforms might produce dissimilar results.

4. This study only aimed at measuring the improvement of grammatical accuracy in the students' writing, since it was directly relevant to error reduction in L2 writing.

In conclusion, this chapter starts with background of the study, followed by statements of the problems, and rationale of the study. The research gaps, considered as significant, are also introduced in order to make this study more rigorous. Finally, purposes of the study, research questions, significance of the study, definitions of key terms, and scope and limitations of the study are presented.

CHAPTER 2

LITERATURE REVIEW

This chapter comprises reviews of the literature covering sixteen principal sections: introduction, L2 writing difficulties, causes of L2 writing errors, Error Analysis (EA) for grammatical error identification, grammatical error categories found in L2 writing, grammatical error categories used in the present study, learning theories related to online collaborative discussion, online collaborative discussion (OCD), elements and strategies for effective online collaborative discussion (OCD), tasks for online collaborative discussion (OCD) used in the present study, models of online collaborative discussion, instructional design models relevant to construction of the SMCD Model, Brahmawong's seven-step for R&D prototype development, Web 2.0 for online collaborative discussion (OCD), conceptual framework of the present study, and summary of the chapter.

2.1 Introduction

This study aimed to examine the effects of online collaborative discussion (OCD) via a social network, in this case Facebook, on the reduction of grammatical errors in EFL students' writing. The main emphases of this chapter are therefore on syntactic errors in L2 writing, theories of language learning directly related to the present study, and some insightful reviews on today's social network technologies for use in online discussions as a part of L2 writing classes.

Any research claiming to be rigorous must accurately and thoroughly define the nature of the variables. Similarly, due to the nature of this research, rigor requires that the nature of students' writing problems regarding grammatical errors must be accurately defined; as a result, grammatical errors, causing ineffective writing in terms of accuracy in both Thai and ESL contexts, is carefully analyzed. Additionally, this present research aimed at using these understandings to reduce grammatical errors in L2 writing. Online collaborative discussion (OCD) was thus employed, based on theories of second language acquisition, consisting of social constructivism and collaboration as a teaching method. Thus, as a supplement to theories of errors in students' writing, the literature regarding learning theories and the uses of technology to support online collaborative discussion are purposefully presented so as to gain a fuller picture of the problem and its possible remediation.

2.2 L2 Writing Difficulties

In the task of writing, L2 learners have clearly found language to be the most problematic difficulty due to their limited language proficiency or limited linguistic knowledge. Silva (1993) explains that inadequate language knowledge often leads to ineffective L2 writing. These problems may at times be attributed to the differences between first and second language. Olsen (1999) notes that some EFL writers cannot create an effective written work due to the inadequacy of syntactic and lexical competence, which makes them confused with the systems of the target language they are learning. Besides, to quote Weigle (2002), "because of the constraints of limited second-language knowledge, writing in a second language may be hampered because of the need to focus on language rather than content" (p. 35). She also claims that it is

impossible for L2 students to write in a second language properly without linguistic knowledge regarding grammar and vocabulary. That is, L2 writing can be more difficult providing that L2 learners lack the knowledge of syntactic or language properties, which eventually makes them rely on their first language when writing in a second language.

According to Wang and Wen (2002), L2 writers obviously get stuck when writing in the target language (TL) because their mother tongue significantly affects the use of the second language; consequently, they may at times combine the systems of the two languages in their L2 writing, which is called "language transfer or syntactic transfer". This is considered a severe problem of L2 writing as Fromkin et al. (2003, p.381) clarify:

> L2ers – especially at the beginning stages of acquiring their L2 – seem to rely on their L1 grammar to some extent. This is shown by the kinds of errors L2ers make, which often involve the transfer of grammatical rules from their L1.

In order to comprehend L2 writing difficulty in terms of language and syntactic transfer more clearly, a number of researchers as well as scholars have paid much attention to identifying the indicators of hardships L2 student writers may confront while writing.

Chan (2004) investigated the evidence of syntactic transfer from Chinese into English. The data obtained from 710 Hong Kong Chinese students were to be analyzed. The methods of this research were individual interviews, translation, and grammaticality judgment. During the data collection process, the students were asked to translate Chinese sentences into English and to correct 20 ungrammatically written English sentences, using their own language judgment. The focus of errors was on

five categories: copula control, adverb placement, inability to use *there is*, failure to use relative clauses, and confusion in verb transitivity. The results showed that the syntactic transfer was most often employed by learners of a low proficiency level. That is, the learners at this level relied more on their L1 syntax and lexicons, which they resorted to when writing in the second language. Thep-Ackrapong (2005) states that errors caused by the dominant of the first language are called "the negative interference of the mother tongue" (p. 53).

Working with Thai learners, Thep-Ackrapong points out, "English and Thai are different at all levels: pronunciation, word, grammar, and text" (p. 51). Apparently, grammar is one of the aspects involved in all types of language skills ranging from listening to writing and is always thought the most difficult by Thai learners. Therefore, writing tasks do not seem easy for them because most of the Thai language systems are different from the English systems. Errors, consequently, can be made at all times.

Additionally, Jenwitheesuk (2009) studied the syntactic errors demonstrated in Thai college students' writing and concluded that the causes that led to the errors in EFL learners' paragraphs were mainly from the interference of the first language. She explained, "The differences in both vocabulary and the structures of the two languages cause the problems in writing the second language" (p. 986). Similarly, Weijen et al. (2009) examined the use of L1 in writing augmentative essays of 20 second language students. The participants were asked to write under the conditions of think-aloud protocol. The students' writing process as well as their language use was then observed and recorded. The results revealed that all the participants were dominated by L1 while performing the tasks; that is, because of L1 influences, the

quality of L2 writing was significantly decreased. It was therefore concluded that L1 use during L2 writing had negative impact on L2 students' writing quality and proficiency in terms of writing performance and language structures. Consistent with Jenwitheesuk and Weijen et al., Mojica (2010) explored the writing problems reported by L2 learners from Korea, Turkey, The Philippines, Thailand, and China. The results revealed that the two problems that concerned L2 writers the most were grammar and vocabulary.

In sum, as stated above, grammar and vocabulary are perceived to be the principal problems obstructing the effective writing of ESL/EFL learners and have recently become serious issues to which many language researchers have paid attention. To understand grammatical errors clearly, causes of such errors are thus necessary to be mentioned. The next section presents causes of writing errors and points out which cause is perceived as the most problematic in L2 writing contexts.

2.3 Causes of L2 Writing Errors

Causes of errors have been viewed in somewhat similar ways. Normally, interlingual and intralingual interferences are considered as major factors of grammatical errors in L2 writing. Nonetheless, some scholars further address some other causes, apart from those two categories, in order to make the case of error analysis more comprehensible.

With regards to Brown (1994), causes of errors are mainly from interlingual interference and intralingual interference. He refers interlingual interference as the native language effect, which is regarding the negative transfer of L1 systems. That is, due to the limited linguistic knowledge of L2 learners, they often rely on their first

language properties and make use of them in their L2 writing, apparently causing such errors. On the contrary, intralingual interference is related to errors caused by the interference of the target language, for example, misuses and undergeneralization of L2 grammatical restrictions. Besides, James (1998) addresses four causes of errors, namely interlingual errors, intralingual errors, communication strategies-based errors, and induced errors. In brief, interlingual errors and intralingual errors, similar to Brown's types of causes, are made because of the interference of the mother tongue and the target language, respectively. On the contrary, the two latter causes are different as the errors are not from the interference of languages but from the use of communication strategies and the incorrect grammatical rules explained or taught by teachers.

Interestingly, Norrish (1987) explains that the influence of the first language plays a major role in L2 learning, since learners habitually use their mother tongue when studying a foreign language. According to Norrish, three causes of errors include carelessness, first language, and translation. Obviously, only the first cause is related to the lack of motivation; that is, students themselves are not interested in studying a new foreign language because of teachers' teaching styles or inappropriate materials used in classes. In contrast, the second and third causes are from L1 interference as students employ L1 systems in their L2 writing or translate word by word literally, that is direct translation or literal translation, which causes errors in language structures.

In addition to Norrish, Dulay et al. (1982) discuss automatic transfer when students make use of their L1 structures in the target language habitually. Bhela (1999) describes transference as resulting from the learner's assumption of language

equivalence. However, as stated earlier, no language is identical regarding structures, lexicons, and systems; hence, the students' prediction of equivalence leads to errors and mistakes in production in their second language written outcomes. Furthermore, Hashim (1999) describes L1 interference as a cross-linguistic and language transfer, which refers to the interference of the students' mother tongue when they perform either in spoken or written forms. Jie (2008) also explains that the influence of the mother tongue affects L2 learning in that "language is taken as a set of habits and learning as the establishment of new habits, a view sprung from behaviorism, under which language is essentially a system of habits" (p. 36). Not only do foreign researchers pay much attention to L1 interference in L2 students' writing, but many Thai researchers also do.

Tuaychareon (2003) sees that Thai students commit errors and mistakes in syntactic level because of their limited linguistic knowledge. That is, due to inadequate language knowledge, L2 writers make use of their mother tongue in L2 writing; therefore, the use of inappropriate structures and words are often seen. Consistently, Thep-Ackrarapong (2005) sees the interference of L1 lexicons as a main problem in the translation of the target language as well as in writing a second language. The interference, in her sense, is the students' violation of the collocation restrictions such as the words 'do' and 'make', 'turn on' and 'open', etc. Thai learners tend to violate the collocation rules in using words due to their limited vocabulary, which also further causes interference to other levels like syntactic and discourse levels. Bennui (2008) defines L1 interference in Thai students' writing as a process in which Thai learners always think in Thai before writing in English. In doing this, errors can inevitably be expected as he clarifies, "Students' Thai language structures

and culture inevitably interfere with their written English" (p. 73). In a nutshell, L1 interference, as explained, is frequently a function of L2 writers' predictions of syntactic equivalence between first and second language, which leads to such grammatical and lexical errors in L2 writing.

As can be seen, the interference of the first language is the most problematic cause in L2 writing, as mentioned above. However, since errors can be from other causes as well, for example, intralingual interference, carelessness, induced errors and so on, this study therefore emphasized grammatical errors in general. In doing this, more grammatical error types could be detected so as to be used in the main study.

2.4 Error Analysis (EA) for Grammatical Error Identification

To study grammatical errors in the acquisition of a second language, either Contrastive Analysis (CA) or Error Analysis (EA) can be employed by language researchers. Basically, a comparison between the mother tongue and the target language can normally be done with productive skills like speaking and writing. Richards and Schmidt (2002) explains that Contrastive Analysis (CA) can be used to identify learning problems in a second language. In addition, such difficulties detected can lead to the effective production of teaching materials, used to decrease grammatical errors in L2 writing performance.

Even though Contrastive Analysis can be used to analyze grammatical errors in L2 language production, it is comparatively time-consuming as students are asked to write assigned tasks in two languages. Consequently, the technique of Error Analysis (EA), also called Interlanguage Analysis, was created. Maicusi et al. (2000) state, "The error analysis supplanted Contrastive Analysis and became a recognized

part of Applied Linguistics" (p. 170). James (2001) describes EA as an alternative approach used to investigate the errors in the target language, which are derived from ignorance by L2 students. In addition, this ignorance is occasionally based on the misuse of linguistic properties that the users do not know about. In addition, Jie (2008) states that since errors occurring in L2 learners' performance have drawn so much attention from language researchers, Error Analysis has been the most frequently selected technique to analyze the errors caused by the influence of the mother tongue. Clearly seen, EA does not only assist researchers to identify error types in the target language but also helps L2 learners understand why they make such errors and start learning how to correct them.

For this reason, Error Analysis was employed in the present study in order to detect grammatical errors in Thai students' writing as well as to come up with error categories to be encountered in the three writing genres, namely narration, description, and comparison-contrast. Apart from grammatical errors identification, the theory of EA is as well particularly useful in the process of developing methods of grammatical error reduction in this study.

2.5 Error Categories Found in L2 Writing

In order to assist student writers to enhance their writing performance, syntactic problems should be identified and categorized. A great deal of research has, over the past few decades, focused on these problems. Since each language is not similar in terms of linguistic properties, categories of the errors are therefore varied. This section presents studies on L1 interference as well as grammatical errors in L2 writing conducted outside Thailand followed by those in the country.

Bhela (1999) explored errors in L2 student writers. The participants spoke four different languages, including Cambodian, Italian, Spanish, and Vietnamese. They were assigned to write stories according to the pictures given. Then the error types found in each written story were classified as follows: 1) Apostrophe, 2) Punctuation, 3) Spelling, 4) Prepositions, 5) Capital letters, 6) Present & past continuous tenses, 7) Subject pronouns, 8) Vocabulary, and 9) Passive & active voice.

Chan (2004) studied the errors in the writing of Hong Kong Chinese students to examine how syntactic transfer affected the effectiveness of students' writing performance. According to the study results, five syntactic structures were found:

1. **The copula**: This type of error is involved in the use of verb 'be' as a linking verb in English. Normally, Chinese structures are equivalent to English linguistic features in terms of the use of *be* to link between a subject and a subject complement, when it is a noun. However, when a subject with an adjective complement is written in Chinese, the verb *be* is not necessary in a sentence, and it can be omitted.

2. **Placement of adverbs**: Chinese writers encounter this error type because in the Chinese language, adverbs are always placed before verbs. On the other hand, in English, adverbs can occur either before or after verbs and sometimes at the end of sentences.

3. **Expressing the existential or presentative function**: As is true in the Thai language, a Chinese sentence sometimes does not need a subject. As a result, many Chinese students have problems with the use of "*There be*" structure.

4. **Relative clauses**: This distinction between English and Chinese is obvious, since in English a relative clause is always placed after a noun as a modifier; in contrast, a Chinese relative clause is at times put before a noun it modifies.

5. **Verb transitivity**: A verb may be transitive in one language and not the other. For example, some Chinese verbs, which are intransitive, may be transitive in English and vice-versa.

Ferris (2004, p.53), a well-known researcher in the area of error feedback in L2 writing, states that before giving feedback to students, it is crucial for teachers to be aware of errors frequently made by ESL learners. She proposes the most common ESL writing errors in five main categories as follows:

1. **Morphological Errors**
   1.1 Verbs consisting of tense, form and subject-verb agreement
   1.2 Nouns comprising articles/determiners and noun endings (plural/possessive)
2. **Lexical Errors**
   2.1 Word choice
   2.2 Word form
   2.3 Informal usage
   2.4 Idiom error
   2.5 Pronoun error
3. **Syntactic Errors**
   3.1 Sentence structure
   3.2 Run-ons
   3.3 Fragments
4. **Mechanical**
   4.1 Punctuation
   4.2 Spelling
5. **Miscellaneous**

Thep-Ackrapong (2005) divides the influence of the mother tongue into six main categories: 1) Subject-verb agreement, 2) Topic-comment structure, 3) Passive voice, 4) Relative clause, 5) Participial phrase, and 6) Subordination. She further

argues that these six discrepancies are often made by Thai students not only in writing but also in translating the target texts.

Sattayatham and Honsa (2007, p. 181-2) conducted a study on medical students' most frequent errors in translation and writing. The students were asked to translate from Thai into English at both sentence and paragraph levels as well as to write an opinion paragraph according to the given topic. In doing this, the researchers analyzed the students' outcomes in order to detect the most frequent errors. In the study, errors found in the written paragraphs were classified in 28 categories as follows:

1) Tense (Non-parallel form of verb)
2) Wrong use of verb to be
3) Spelling mistake
4) Wrong use of verb
5) Article
6) Omission of subject
7) Tense (present continuous/present perfect)
8) Subject – verb agreement
9) Direct translation
10) Conditional sentence (unreal present, unreal past)
11) Connector
12) Wrong choice of vocabulary
13) Wrong plural form
14) Infinitive (purpose)
15) Capitalization
16) Punctuation
17) Wrong use of pronoun
18) Fragment of sentence (incomplete sentences punctuated as complete sentences)
19) Wrong order of adverb
20) Passive voice
21) Possessive
22) Run-on sentence (two complete sentence joined by a comma)
23) Omission of verb
24) Relative pronoun (whose/who)
25) Wrong form of noun
26) Complex sentence without conjunction
27) Comparative & superlative
28) Question tag (wrong use of "tag")

Bennui (2008) pursued his research on L1 interference found in Thai university students' paragraphs. He employed both Contrastive Analysis and Error Analysis to identify L1 interference types. According to the study results, he classified L1 interference into three main categories:

1. **L1 lexical interference**: This sort of interference happens because of the lack of lexical competence. Furthermore, the vocabulary levels of the two languages are different; therefore, when writing or translating in English, Thai students normally use a form of direct translation, which leads to the errors in terms of word choice. The sub-categories of L1 lexical interference are *1) Literal translation of vocabulary use and 2) The use of Thai words*

2. **L1 syntactic interference**: This category is related to grammatical errors found in students' writing. He divides this interference into seven sub-categories as follows: *1) Word order based on Thai structure, 2) Subject-verb agreement, 3) Tense,4) The infinitive, 5) The verb 'have', 6) Prepositions, and 7) Noun determiners*.

3. **L1 discourse interference**: This happens because of the differences between the styles of Thai and English writing conventions, including essay patterns, organization, and concepts. For example, in English, it is essential to include a topic sentence in every paragraph, while a Thai paragraph need not have it. The sub-categories of this interference are *1) Language style level and 2) Level of cultural knowledge*.

Jenwitheesuk (2009, p.984-5), studying errors in the writings of third year college students, explained that all the errors found in the data were mainly from the

syntactic transfer between the mother tongue and the target language. Here, the

categories of errors were classified as follows:

1) **Subject-verb agreement**:   This included the non-agreement in the use of subject and verb in various types of sentences: statements, questions and negatives.
2) **Preposition**: This included the incorrect use of subjective pronouns, objective pronouns, pronouns to represent the relationship, possessive pronouns, reflexive pronouns; the omission of pronouns and the word order of the pronouns in the sentence.
3) **Conjunction**:   Errors of this type were the wrong choices of conjunction, including omission and the unnecessary use of conjunctions in a sentence.
4) **Determiner**:   This was counted as a misuse, an omission, and the use of unnecessary determiners in a sentence, both definite and indefinite determiners.
5) **Tense**: This was counted when the sample applied the wrong or inconsistent use of tenses.
6) **Infinitives and Gerunds**: These types of errors were applied when the sample made mistakes in using infinitives and gerunds.
7) **Auxiliary Verbs**:   This type of errors included auxiliary verbs that were incorrectly or negligently used.
8) **Incomplete structure**: This was counted when there was no subject, modifier or object in a sentence which obstructed the comprehension of the meaning.
9) **Run-on Sentence**:   This type of errors included the omission of punctuations when needed, and the repeated use of the subject or the verb in a sentence.
10) **Word Order**: This was applied for the misplacement of the words in a sentence which distorted the meaning of the sentence.
11) **There-be application**:   This was counted when the sample used *verb to have* instead of *there be structure* or other structures.
12) **Possessive Structure**: This type of errors was counted when the sample used *of* instead of apostrophe ('s) to indicate possessive form or the omission of possessive structures where it was necessary.
13) **Singular and Plural Nouns**: This included the non-agreement of the use of the singular and plural nouns in a sentence.
14) **Relative Clause**: This included the incorrect use of adjective clauses or adverbial clauses.

15) **Participial Phrase**: This included the grammatically incorrect use of participial phrases both in the present and the past tenses.

In conclusion, many error categories have been found and proposed in the area of teaching L2 writing. To consider the categories of grammatical errors as illustrated above, those that affect L2 writing accuracy need to be determined, since grammatical errors have been considered as the main problems of L2 students' writing difficulty.

2.6 The Categories of Grammatical Errors Used in the Present Study

The grammatical error categories used in this present study were taken from the analysis of undergraduate students' written paragraphs. It is based on the assumption that a particular solution should be used with an authentic problem. Thus, this section only presents the categories of errors that had already been found in the preliminary study, and were then used in practical application in the main study.

In order to find out what types of grammatical errors existed in the particularly selected context, a preliminary study with regards to grammatical error identification was conducted (details are presented in Chapter 3). The categories of grammatical errors were *singular/plural form, sentence structure, verb tense, word choice, subject-verb agreement, the use of articles, preposition, verb form, run-on sentence, fragment, modal/auxiliary, to-infinitive/gerund, pronoun, comparison structure, parallel structure, and transitional word*. Many of the error categories found were comparatively similar to those determined by the cited Thai researchers' studies (Thep-Ackrapong, 2005; Sattayatham & Honsa, 2007; Jenwitheesuk, 2009). In keeping with the work of Kaweera and Usaha (2007), the error types selected were

narrowed down to noun ending, article, wrong word, verb, and sentence structure. The selection of error types was based upon the consideration in relation to the students' writing performance, and the five error types mentioned above were perceived as common problematic errors that many Thai students frequently made.

Last but not least, all the error types that were found in the participants' paragraphs and selected for this research were also used to develop the SMCD process of this present study.

2.7 Learning Theories Related to Online Collaborative Discussion

A key component of the present study is to address a real-world problem with a practically applicable solution. This study thus focused on the reduction of grammatical errors in L2 writing, employing online collaborative discussion (OCD) in order to help students develop their linguistic knowledge through self-correction (Ferris, 2004), which was advantageous to their L2 writing revisions. The theoretical underpinnings of this approach are two learning theories relevant to the construction of the online collaborative discussion model. These are social constructivism and collaboration. Prior to mentioning these two learning theories in deep details, it is essential to first introduce the constructivist theory, which is related to knowledge construction of learners.

2.7.1 An Introduction to Constructivism

Over the last few decades, the constructivist theory has drawn interests from educators involving in a variety of academic institutions, and it has also been significantly mentioned in a great deal of educational research. Driscoll (2000, cited in CAN, 2009) explains that the constructivist theory is derived from psychological

and philosophical concepts related to "the cognitive and developmental perspectives of Piaget, the interaction and cultural emphases of Vygotsky and Bruner, the contextual nature of learning, the active learning of Dewey, the epistemological discussions of von Glasersfeld, postmodernist views, and the paradigm and scientific revolutions of Thomas Kuhn" (p. 60). Importantly, constructivism is directly relevant to inner knowledge a particular individual has. Basically, knowledge from the constructivist point of view is not what is sought from the outside world; on the other hand, it is continuously constructed in its social context by the learner analyzing, developing, and interacting with the environments so as to come up with new experience (Bruner, 1966; Piaget, 1973; von Glasersfeld, 1995; Lowenthal & Muth, 2008). Many constructivist theorists have viewed knowledge as being constructed not only from an environment or a provided problem but also from an individual's existing experience. That is, prior to constructing such new knowledge, a learner's previous experience as well as background knowledge is essential. Likewise, when encountering such problems in a prepared environment, a learner thus makes use of his/her experience in order to solve the difficulties. The solution, created by the learner, can be considered as a set of meaningful knowledge that is constructed to be authentically used in that setting (Perkins, 1991).

In addition to knowledge construction, the constructivist theory emphasizes active learning, which is distinguished from behaviorism, since learners have to invent knowledge from a particular setting provided by a teacher. CAN (2009) asserts that instead of awaiting knowledge from a teacher, learners need to be responsible for themselves in order to autonomously create new experience during the learning process. To comprehend what active learning and passive learning are, it is crucial to

compare constructivism to behaviorism as Norton and Wiburg (2003) identify the
differences between both of them as shown in Table 2.1.

Table 2.1 Behaviorist Learning vs. Constructivist Learning (Norton & Wiburg, 2003,
cited in Hamat & Embi, 2010, p. 238)

Behaviorist learning	Constructivist learning
Teachers present; students listen.	Teacher facilitates; students do, present, think, construct.
Working together is cheating.	Working together facilitates learning and problem solving.
Subjects are presented separately.	Subjects are integrated into a learning whole.
Learning is fact-centered.	Learning is problem-centered.
The teacher is the source of all knowledge.	There are many rich resources for learning.
Print is the primary source of information.	Concepts are explored using a variety of communication tools.
Assessment is based on how much is memorized and can be given back to the teacher.	Assessment is based on each student's developing abilities to solve problems, communicate ideas, present information, and learn how to learn.
Schools are isolated and separated from the rest of the community.	Technology connects the world to the classroom and the classroom to the world.

Sharing the same views, Davis et al. (1990) points out that knowledge can be
constructed by either individuals or groups of learners. However, the knowledge must
be a solution to a particularly set problem presented in an environment that is
prepared by a teacher. As a result, the role of a teacher is not to give knowledge but to
facilitate students during the process of knowledge construction. Similarly, Jenkins
(2000) states that the construction of knowledge requires a genuine active

participation from a learner. In addition, Fox (2001) explains that constructivism discourages passive learning, which is, at present, perceived as an obsolete approach. In essence, the emphasis of the constructivist theory is on the active engagement of students in the learning process. As supportively stated by Lowenthal and Muth (2008), passive learning is now regarded as a teacher-centered method, and has been eclipsed by an active learning strategy, often referred to as the student-centered approach, due to the fact that learners are required to actively participate in a specifically prepared environment so as to collaborate to find out an appropriate solution, defined as newly constructed knowledge.

Apart from active learning as mentioned earlier, the constructivist theory also places an emphasis on the use of the previous knowledge or personal experience. An individual has to make use of his/her own knowledge, sometimes called scaffolding, in order to actively participate in learning new knowledge as well as constructing new experiences (Naylor & Keogh, 1999). Constructivism as applied to knowledge construction of an individual and a collective group of learners boosts the power of discussion and collaboration among learners as Phillips (1995) has said. This approach to teaching and learning encourages not only cognitive invention but also the power of discussion, significantly relevant to the theory of social constructivism, which focuses on learners' collaboration.

2.7.2 Clarification of Constructivism and Social Constructivism

As stated earlier, the constructivist theory, also referred to as cognitive constructivism, focuses on the individuals' cognitive construction based on each learner's previous knowledge. Still, the creation of such knowledge cannot be effectively done individually but collectively. Therefore, the theory of cognitive

constructivism must be related to social interaction among learners so as to describe the ways that they assist one another to share as well as to exchange their existing experiences. Maxim (2006) clarifies the relationship between cognitive constructivism and social constructivism in that these two dimensions are somewhat similar in terms of knowledge scaffolding of a learner. In addition, Lowenthal and Muth (2008) indicate that the development of this theory is initially from Vygotsky who argued that real cognition must be constructed from learners' interaction in terms of social norms, cultures, and personal knowledge by means of inter-and intra-personal communication. Social constructivism gives an emphasis on social responsibility that requires each learner to take; in other words, the theory is very much related to a sense of collectivity of members in organizations or communities to help one another to get through difficulties and eventually reach the same goals. To outline the differences and similarities between cognitive constructivism and social constructivism, Chen et al. (2000) briefly summarize them as follows:

Table 2.2 Summary of Constructivism and Social Constructivism (Chen et al., 2000,

cited in Hamat & Embi, 2010, p. 240)

Learning Framework	Constructivism	Social Constructivism
Assumption	Knowledge is constructed by the individual.	Knowledge is socially constructed.
Definition of learning	Students build and apply their own knowledge.	Students socially build, share and agree upon knowledge.
Learning strategies	Collect unorganized information from the world and create concepts and principles.	By exchanging and sharing notions with others, ideas are formed and thinking occurs.
General Orientation	Personal discovery of knowledge.	Learning is a social construction, mediated by different perspectives.
	Discover relations between concepts, e.g., addition and subtraction.	Through authentic projects, students discuss and discover meanings, e.g., the concept of multiplication. Teachers provide for facilitation and scaffolds among students.
	Teachers provide instructional context for active and self-regulated students.	

To effectively enhance learning outcomes, the educator must be in a position

to integrate social constructivist principles with cognitive constructivism so as to

foster social collaboration for the construction of such knowledge. Here then is a

paradigm shift of learning approaches that emphasizes peer-to-peer interaction among

particular community members who collaborate, share, and exchange what

knowledge they have got in order to gain new potential cognition (Jones & Brader-

Araje, 2002). For Jones and Brader-Araje, the power of collaboration is essential and

effective. As a result, American classrooms have been making use of this strategy as

they provide discussion spaces for students to work in groups so as to be able to interactively assist one another to find out an appropriate solution for such assigned tasks.

As clearly seen, social constructivism forms the theoretical basis for the creation of learner communities, a stance that is significantly relevant to the development of collaborative discussions in general and online collaborative discussions (OCD) in particular. That is, practical knowledge is not only created from a person but prepared by a number of learners having the same learning purposes, eventually leading to newly constructed knowledge.

2.7.3 The Theory of Collaboration

Many theorists perceive collaboration and social interaction as an essential factor of successful learning. Vygotsky (1978) states that individuals have to relate themselves to social and conceptual knowledge represented in such environments so that the genuine learning development is comprehensible. He also points out that, in doing this, effective collaboration among peers is created to make knowledge and experience easily produced. However, to successfully construct knowledge, scaffolding and assistance offered by teachers and more skillful peers are crucial. To support Vygotsky's points of views on collaboration, Bruner (1986) explains that from discussion and interaction, learners can examine their own understandings as they have opportunities to contribute their efforts to constructing experiences that can be used to solve an exact problem. It can be argued that collaboration is one of the major elements latent in constructivist theory. Lam and Wong (2000) clarify that such cooperation and support among peers should be incorporated appropriately, as each individual requires some assistance from more capable members in order to get

through difficulties. As in a writing activity, students are able to contribute their efforts to group discussions and collaboration so as to produce a good piece of written work. Discussions can be an exchange of ideas in terms of organization, vocabulary use or grammatical structures, for instance. Besides, Robbins (2001) points out that, in keeping with Vygotsky, the importance of knowledge construction is the interaction of learners in a particular society. Chiefly, the more worldwide social interaction is created, the more internationally knowledge is accepted.

Savery and Duffy (2001) view the constructivist theory compatible with collaboration in three propositions:

1)   The principle construction of knowledge is related to the interaction of members involving in a provided setting or environment. That is, in order to verify the knowledge constructed in each individual, a learner must perform what he/she knows to peers to check whether the experiences created can lead everybody to reach the same goals.

2)   Prior to coming up with such knowledge, either a conflict or a problem should be raised, as a directional objective of learning, so that learners can prepare their previous experiences so as to construct new ones suitable to be used as a solution to solve the problem.

3)   To examine what a learner acquires with peers, a collaborative group, sometimes referred to as social interaction, is essentially needed as the discussions, together with the group negotiation, in terms of comprehension testing, have to be established.

Briefly, Savery and Duffy's viewpoints regarding the theory of constructivism and collaboration assert that in order to gain new knowledge, learners must relate their

existing experiences to a particular set of difficulties in an environment so as to come up with an appropriate solution. Even though each learner can construct knowledge individually, a collaborative discussion among peers is still required for examining and increasing comprehension as well as furthering understanding in accordance with the same learning purposes.

Ordinarily, not only is a peer or group of peers an essential component in the theory of collaboration, but also a teacher plays a major role as a facilitator. According to National Research Council (1996), the roles of a teacher in a collaborative setting in the USA are described as a facilitator and assistant who assists students to work in their own groups with no trouble, monitors, and encourages them to collaboratively and effectively discuss information. To clearly illustrate, Shafie et al. (2010) conducted a study on collaborative academic writing among university writers in Malaysia. The difficulties during the process of collaboration were reported by the student writers as they encountered them when discussing their ideas with peers. The participants faced conflicts and needed to adapt themselves with different peers. The focus of this study was also on the understanding of the nature of collaboration in a writing class. It was recommended that the roles of a writing teacher were not only to teach the students writing skills but also to prepare them to compromise and negotiate for effective collaboration. On the whole, to boost the power of collaboration, teachers and learners should work together with no conflicts. As asserted by Yong (2010), during the writing process, the teacher's guided supervision of students' contributions to group discussions and interaction is such an important factor that helps them overcome the disagreement and accomplish their writing tasks.

Interestingly, the digital age has helped to transform the traditional form of collaboration, often a face-to-face discussion, which has come to be perceived as limited in terms of time and distance. That is, collaborative discussions are not done exclusively in classrooms but can now happen anywhere. Consequently, because of such technological advancement, collaboration has increased its effectiveness, which is considered advantageous to language teaching. Edelson (1996) explains that a personal computer with the Internet is now being employed for distance communication via email or social networks. As a result, both discussions and classroom activities can be carried out through websites, blogs, and forums, to name a few. The opportunities to exchange ideas and knowledge have therefore expanded. As Driscoll (2000) states that the new developments in technology have helped learners authentically enhance their learning potential, since through online collaborative sites, learners can discuss, investigate, and share knowledge with others either synchronously or asynchronously in order to achieve their learning goals. Especially in asynchronous settings, learners can be more confident in sharing with peers due to the fact that they have more time to prepare essential skills and information prior to the discussions. To interactively work with social members, the sense of civic responsibility is fostered among the individual group members.

All in all, the theory and practice of collaboration has received much attention from a number of scholars with regards to the assertion that it does help learners develop their learning abilities. More attention has recently been given to online collaboration, which is seen as a new form of collaborative interaction. Related to this present study, online interaction is the basis of the Online Collaborative Discussion (OCD) model, which is employed as a means to assist students to collaboratively

work online. The goal is for learners to construct particular knowledge, which can eventually lead to applicable knowledge in terms of grammar and lexicons for students' effective L2 writing revision.

2.8 Online Collaborative Discussion (OCD)

Due to recent technological advancement, online collaborative discussion (OCD) has emerged as a new way to facilitate learner autonomy. Dickinson (1987) explains that autonomous learning pertains to all learning activities, practices, and assessment, and is based upon the learner's decision mainly made outside traditional classrooms. Therefore, learning designs are dependent on a learner's satisfaction. In addition to encouraging autonomous learning, writing technologies also decrease the risk of discrimination in terms of gender, ethnicity, class, and social differences, which also promotes learning collaboration (Eldred, 1991). As stated by Hyland (1993), unlike face-to-face discussion (herein F2F), online discussion offers advantages to the teaching of writing because teachers, learners, and peers can freely interact with one another through communicative technological tools for discussion and revision of written works. Yang and Chen (2007) support this claim by clarifying that EFL students enjoy working and discussing online through computer programs because to them, this technology is current and interesting, especially as it helps them stay connected with their peers and teachers at all times. It is thus reasonable to expect to see online discussions having better learning outcomes than F2F discussion. In order to illustrate the advantages of online collaborative discussion (OCD) used in a writing class, some studies shall be reviewed.

Yuan (2003) examined the use of chat rooms in an ESL class. Interestingly, it was an example of the integration of teaching between a conventional classroom and an online mode of communication. In addition to classroom interaction, online chat rooms were used as a space for the participants to discuss their writing assignments. The results showed that even though F2F discussion might help the participants notice their writing problems, online discussion provided more opportunities for the students to improve their syntactic competence and performance, which helped them significantly develop their language abilities in terms of lexicons and grammar. Online discussion tended to enhance students' writing rather than classroom discussion because learners felt free and relaxed when discussing online. Kelm (1992) explains that either synchronous or asynchronous communication helps reduce learners' anxiety as they are able to express what they need to know or explain without facing their classmates or teachers, and thus the participation in discussion sessions is increased.

Mitchell (2003) investigated the effects of using online discussion in a teacher education program. In the study, the participants were assigned to engage in an online discussion environment so as to complete the assigned tasks. The purposes of this research were to examine how technology could be employed as an instrument to extend the learners' knowledge outside classrooms. The result demonstrated that after the completion of provided online tasks, effective writing practices were significantly improved because the participants paid attention to collaboration and online activities. Notwithstanding these results, it was discussed whether or not online discussion was effective, depending on "the degree of alignment between the discussion topics, the process of online writing, and other forms of coursework" (Mitchell, 2003, p. 140).

Sapp and Simon (2005) support the claim that online learning offers positive effects to language learners. They state that the conventional writing classrooms have been neglected on account of the popularity and advantages of online learning. Due to this, they say that online writing technologies are now perceived as crucial in modern writing classes.

Sands (2005) studied the effectiveness of a writing class using computer technology along with traditional teaching methods like in-class lecturing and face-to-face learning. Computer-Assisted Language Learning (CALL), virtual classroom, and online discussion through emails, were exploited in the learning activities. The analysis compared learners and teachers' interaction in both F2F discussion and online discussion on particular writing assignments, using observation, audio-recording, and note-taking. The result revealed that the online technology used positively affected the students' writing effectiveness and their linguistic knowledge acquisition.

In Rilling's (2005) study, an online writing platform was employed to prepare communicative spaces between student writers and instructors for giving comments, correcting errors, and revising drafts. The participants assisted one another to revise their writing in terms of syntax and lexicons, which helped them learn and apprehend linguistic knowledge advantageous to their L2 writing. Furthermore, giving comments online did not embarrass learners since it was not a face-to-face conference. As a result, more participation to discuss, negotiate, share, and exchange opinions occurred.

Anderson (2006) examined the effects of online discussion on students' writing. The emphasis was on learners' reactions when asynchronously discussing,

and considering which or whose comments would be applicable for their knowledge learning as well as writing revision. According to the study results, online discussion enhanced students' learning abilities because in the online environment, the learners prepared assistance and supported one another so as to complete online learning activities. Also, the online interaction and discussion could lead them to the construction of useful knowledge. Anderson further explains, "the value of asynchronous communication is that students can enter a discussion at any time" (p. 120).

In sum, online learning, comprising the modes of collaboration and discussion, is not only helpful for language teaching and learning but is also perceived as a new and attractive method to be employed in a writing class, as it is based on the use of modern technological innovations so familiar to students such as the Internet, the World Wide Web, social networks, and chatrooms, for instance. With these online programs, both teachers and learners are able to freely spend time to interact with one another for exchanging knowledge and opinions under the guidance of instructors (Meyer, 2003).

2.9 Elements and Strategies for Effective Online Collaborative Discussion (OCD)

For an effective online discussion, online learning elements and strategies need to be taken into consideration. Fredericksen et al. (2000) notes that in order to make online learning effective, it is essential to consider the following elements: 1) learners' interaction with the teachers, 2) levels of participation compared to classroom, and 3) learners' interaction with classmates. In accordance with

Fredericksen's notion, element two should be taken into account when online learning is used in a writing setting. That is, the periods of in-class collaboration and online collaboration should be managed appropriately; otherwise, students will rely much more on one or the others of them. Figl et al. (2006) assert that online discussion can be fully effective provided that learners are allowed to authentically participate in the online collaborative discussions among peers; in other words, teachers should decrease the opportunity to discuss face-to-face, since students may choose not to pay much attention to online discussions. Salmon (2004, cited in La Trobe University, 2008, p. 4) presents four principles that enhance the levels of interaction in an online discussion:

1) A small piece of information trigger question or challenge
2) Online activity which includes individual participants posting a contribution
3) An interactive or participative element – such as responding to the posting of others
4) Summary, feedback or critique from an e-moderator

According to Salmon, in order to gain an effective online discussion, online activities as well as assigned online tasks are considered as essential. That is, a good online task must encourage individuals to offer their contributions so as to construct meaningful knowledge. In this present study, assigned online tasks were taken from students' authentic problems, frequently in the generation of L2 writing errors caused by L1 interference, so that they can obtain particular knowledge to be used for their L2 writing revision.

In addition to Salmon, Martyn (2005, p. 61) also proposes the elements of an effective online collaborative discussion as follows:

1) Require students to participate
2) Grade students efforts

3) Involve learning terms
4) Structure discussions
5) Require a hand-in assignment
6) Pose questions and scenarios that require learners to use their own experience
7) Relate the discussion to course objectives

According to both Salmon and Martyn, the most important element of an effective online discussion is learners' participation; consequently, a prompt question or problem should be given to students as a stimulus to motivate them to make use of their existing experiences so as to help each other work out a solution. This process of "working out" is exactly what is called the construction of knowledge. Assistance as well as assessment from an instructor is still needed during the process of online learning.

To make it more comprehensible, Williams and Wache (2005, cited in La Trobe University, 2008, p. 6) summarized the strategies of online discussion enhancement as shown in Table 2.3.

Table 2.3 Strategies Used to Enhance Participation in Effective Online Discussions

Strategy	Implementation
Require participation	Define what behaviors constitute participation, including frequency and quality of required behaviors through provision of examples of acceptable and non-acceptable behaviors.
Formal assessment of participation	Provide clear and unambiguous information concerning how participation will be assessed and what weight this component will contribute to overall course grade.
Provide weekly tasks	Where courses are delivered entirely online, provide clear statements of what is to be achieved each week.

Strategy	Implementation
Stimulus questions	Provide start-up questions for each discussion This could include questions which require individual learners to apply concepts, new information or thinking to practical day-to-day life.
Alternate the role of the facilitator	The role of the moderator/facilitator can be rotated around group members (including the educator). Clear instructions need to be provided concerning the role of the moderator.
Relate discussion to current events or tropical debates	Wherever possible illustrate or ask further questions concerning how the current topic applies to international/national events.
Deal with unacceptable behavior privately	Unacceptable behavior (non-participation, aggressive or potentially disruptive behavior) should be dealt with quickly and in private using email. Clear information should be provided about the unacceptable behavior and strategies or alternative actions provided.
Supportive and encouraging comments	As with face-to-face learning sessions, positive encouragement and support need to be provided. Within the online environment, the lack of visual cues emphasizes the importance of clear verbal (written) feedback especially where learners are fearful of the online environment
Base assessments upon information generated within online discussions	Using material generated from online discussions may encourage learners to actually engage with the discussion. This could take the form of reflective summaries, critique of peers' work or assessment of the quantity/quality of responses from peers within a discussion or over a series of discussion.

Strategy	Implementation
Summarize and close discussions	Prepare to close each discussion by asking an open-ended question which requests learners to clarify and explain what they have learnt through the discussion (but do not limit this to factual, content based material).

In brief, as mentioned above, an online collaborative discussion requires learners' intensive participation; however, to encourage students' discussions, a teacher has to perform his/her duties as a facilitator who provides particular tasks, supports students when they encounter such problems, assesses students' contributions, and finally summarizes what the results are after each discussion session in order to verify whether the outcomes obtained meet the requirements of the learning objectives.

In the present study, which also employs the power of online collaborative discussions (OCD) to reduce grammatical errors in EFL students' writing, specifically prepared tasks in terms of grammatical errors were used to motivate students' interactive discussions through a social networking site. To do this, students received an opportunity to help one another so as to come up with knowledge that could be used to complete the given tasks as well as to revise their written works. The role of a teacher, as mentioned earlier by Williams and Wache (2005), is primarily as a facilitator or a supervisor, monitoring students' participation and assisting them only when necessary during the process of knowledge construction. Not only do these strategies enhance the effectiveness of online discussion, but also present a good model of online collaborative discussion which should be taken into consideration at all steps in the process.

2.10 Tasks for Online Collaborative Discussion (OCD) Used in the

Present Study

A task offers learners an opportunity to practice the language structure at hand, especially in an online discussion environment. An appropriate task is needed so as to make the collaborative discussions as well as the learning activities effective. Davidson (1994) asserts that a good task should be based on five common attributes: suitability of the task for group work, equal interaction, cooperative behavior, positive interdependence, and sense of accountability and responsibility. For collaboration and cooperation, Ellis (2002) also supports the notion that a suitable task for teaching and learning should encourage learners to be able to notice the essence of knowledge, to compare what they have learned with peers, and to integrate knowledge into real practice. In accordance with Ellis and Davidson, it is reasonable to say that a well-prepared task can simply lead all learners to achievement as Leow (2006, p. 133-4) explains,

> It is recommended that pedagogical tasks or activities be designed to do the following: (1) explicitly draw learners' attention to targeted forms or structures and (2) encourage meaningful interaction with the input through the creation of explicit conditions, exposure, or instruction to promote the allocation of more attentional resources to notice such forms.

According to Leow, a collaborative task requires a proper design so as to gain learners' attention, interaction, and genuine knowledge acquisition. As a result, in order to prepare an online task, Gruba (2004) proposes guidelines for online collaborative task design as follows:

Table 2.4 Guidelines for Online Collaborative Task Design (Gruba, 2004, p. 76)

Task component	Purpose
Introduction	Prepare and motivate learner interest in the area
Statement of objective	Describe clearly and simply what you expect learners to achieve.
Steps and processes	Explain the steps that learners should go through to achieve the objective.
Resources	Provide a list of authentic online resources that learners can use to achieve the objective.
Evaluation	Tell learners how to check their work through the provision of model responses that relate to a specific goal within an established curriculum.
Reflection and extension	Encourage learners to think about what has been learned and how to apply that learning to different contexts.

Furthermore, online tasks should be provided and designed according to particular problems students have. In order to genuinely help learners acquire linguistic knowledge and reduce grammatical errors in their L2 writing, the online tasks used in the online collaborative discussion (OCD) model employed in this present study was thus created in accordance with the grammatical error categories found in their written paragraphs.

2.11 Models of online collaborative discussion (OCD)

Based on the theories of constructivism, social constructivism, and collaboration, an online collaborative discussion has been developed. A number of educators have so far been using this approach in classes in order to improve students' learning capabilities. Therefore, models of collaboration must be varied according to each specific context. Since this present study is also related to an online collaborative discussion, two relevant models proposed by Swan, and Gao, Wang and Sun are presented.

2.11.1 Swan's Model of Technology Supported Online Learning

Swan (2005) conducted a study on *A Constructivist Model for Thinking about Learning Online*. In the study, he proposed a model that could be applied to use in a technological environment, called the RCET Model, comprising three domains intertwined to one another – representations, conceptualizations, and use, all of which eventually led learners to authentic learning in their virtual settings.
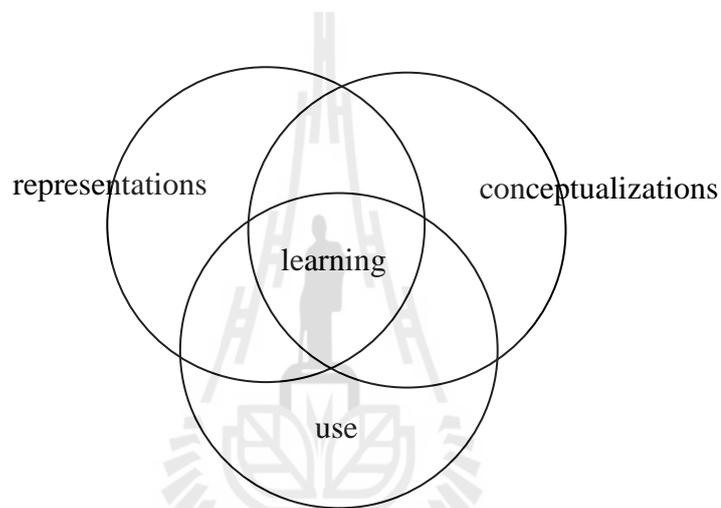
Figure 2.1 RCET Model of Technology Supported Learning (Swan, 2005, p. 10)

To briefly explain, the term representations in particular refers to learners' cognitive presentation. Based on assigned tasks and activities in an online environment, learners present and share their contributions to other members in order to check whether the knowledge they already have is accepted. Swan (2005) explains, "we use external representations of knowledge to communicate our internal conceptualizations and to share them with others" (p. 11). That is to say, the more knowledge is shared, the more new knowledge is conceptualized and constructed.

After the interactive contributions of knowledge, each individual takes these contributions into consideration to organize, process, and manipulate all the

information gained in their minds in order to come up with meaningful experience which is advantageous to their learning. Swan calls this process the conceptualizations of knowledge. She further states, "We assumed that conceptualizations are developed through our interactions with environments, and that they are built up over time into interrelated mental structures" (p. 12).

Lastly, the uses of knowledge are considered as public activities, since the concepts of knowledge, after the representations and conceptualizations, are socially negotiated, which eventually leads to new knowledge specifically constructed by a particular group of learners. In essence, the three terms of the RCET model are apparently related to online learning, social interactions, and knowledge construction. Swan (2005) explains, "the RECT model encourages online developers and course instructors to seriously consider the importance of social supports for knowledge construction and learning" (p. 14).

2.11.2 Gao, Wang, and Sun's Online Discussion Model

In addition to Swan's model, Gao et al. (2009) created a model of online discussion presented in their study entitled *A New Model of Productive Online Discussion and Its Implications for Research and Instruction*. The model comprises three types of discussions for improving knowledge understandings: discuss to comprehend, discuss to critique, and discuss to construct knowledge.
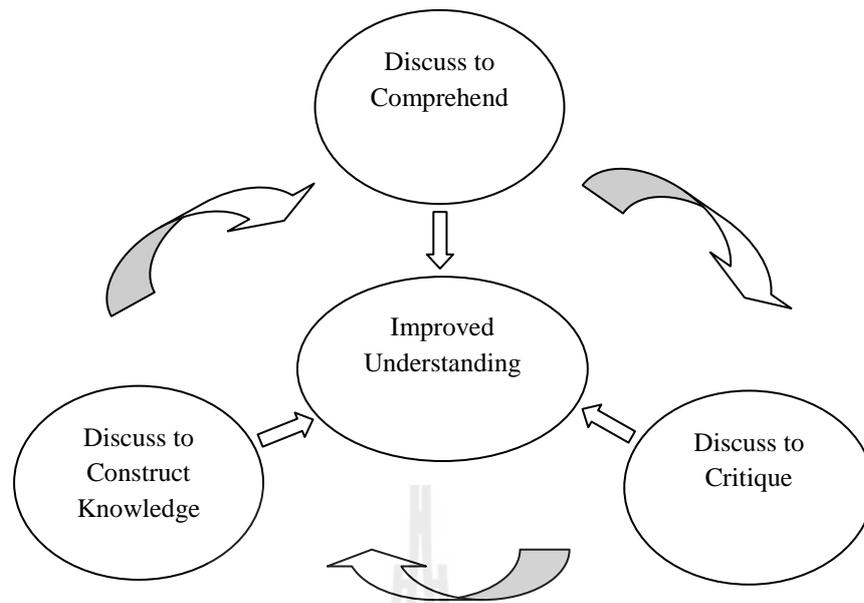
Figure 2.2 The Productive Online Discussion Model (Gao et al., 2009, p. 70)

To briefly clarify, *Discuss to Comprehend* is the process of previous knowledge engagement. That is, learners, when receiving a task, connect their existing knowledge with learning materials and environments in order to perform what they have already known to peers. Then, after each social member expresses ideas, the verification of others' knowledge shared proceeds so as to work out their conflicts during the process of knowledge exchange, which is called *Discuss to Critique* in the model. With regards to *Discuss to Construct Knowledge*, when a conflict occurs in the environment, the negotiation to revise and rebuild new knowledge is created among members for the acceptance of newly constructed cognition. Last but not least, *Discuss to Share Improved understandings* is related to the knowledge synthesis, after an online discussion, learners comprehend the created knowledge and are prompt to make practical use of it in order to complete the particular tasks provided by the teachers.

All in all, online discussions to enhance learners' language abilities have been used increasingly in writing classes since the rise of the technological era. In this present study, the focus was on Web 2.0 technology (see Section 2.12), which has become very attractive due to its multifunctionality, modernity, popularity as well as its simple use. Web 2.0 has just become an interesting issue in the educational fields for only half a decade, which is still new and worth employing as a learning instrument to assist learners to improve their writing skills.

2.12 Instructional Design Models Relevant to the Construction of the SMCD Model

Since the SMCD Model is mainly employed to encourage students' learning and knowledge construction based on collaborative online discussion, instructional design models are reviewed as guidance for the creation of model. According to Gustafson and Branch (2007), instructional design is "a systematic procedure used to develop education and training programs in a consistent and reliable fashion" (p. 17). Although instructional design has been employed in educational areas for half a century, still a number of instructional design models have been continuously introduced due to the development of teaching approaches and trends. In the present study, two instructional design models, ADDIE and Three-Phase Design, are described in that these two models are relevant to the SMCD Model in terms of core elements and steps.

2.12.1 ADDIE Model

ADDIE Model comprises five core components: Analyze, Design, Develop, Implement, and Evaluate. The relationship of each component is presented in Figure 2.3.
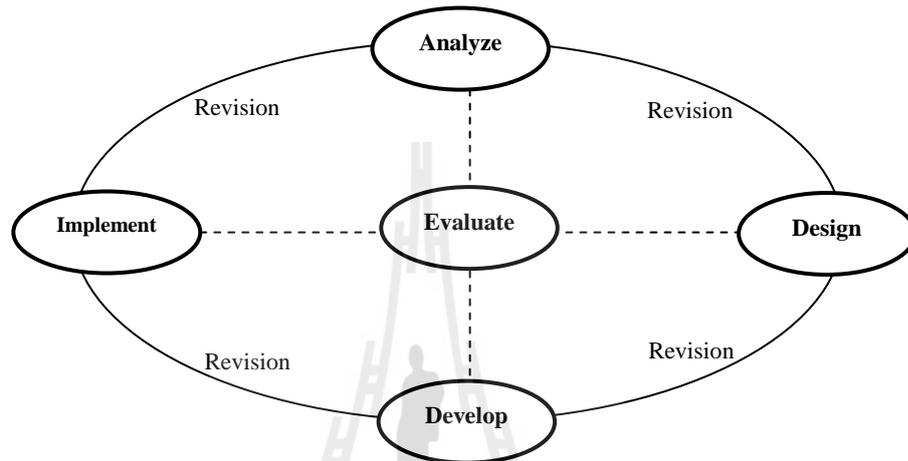
Figure 2.3 Core Elements of ADDIE Model (Gustafson and Branch, 2007, p. 18)

To explain, *Analyze* is the first important step of this model; that is, in this step, problems in a particular setting are analyzed and identified so as to find out a possible solution. *Design* is regarding the use of analyzed problems for planning learning objectives, activities, or tasks to be used during the learning process. After *Analyze* and *Design*, the instructions of lessons or tasks are then developed, which can be related to hardware, software, and online technologies. This component is called *Develop*. Once the lessons or particular instructions are produced based upon the problems and learning goals, they are then implemented with a group of learners that is particularly set by designers. This *Implementation* phase aims at delivering developed instructions, which can be classroom-based, or the Internet-based, to help enhance students' learning; in other words, the provided materials are employed in an

actual setting with learners as their training programs. The last core component of this model is *Evaluate*. Generally, there are two types of evaluation included in this phase: formative and summative evaluation. Formative evaluation takes place during the implementation, and all the data obtained are used to revise to instructions. In contrast, summative evaluation involves the overall assessment of the effectiveness of the instructions.

2.12.3 Three-Phase Design Model

This model promotes the team-based and online learning approaches, which are directly related to online collaborative discussion and the SMCD Model of this study, consisting of three phases: Functionality, Enhancement, and Maintenance, as illustrated in Figure 2.4.

Phase 1: Functionality	Phase 2: Enhancement	Phase 3: Maintenance
PRE-DELIVERY (Analyze, Design, Develop)	**INITIAL DELEVERY** (Implement, Evaluate)	**ONGOING DELEVERY**
A / D / ED	A / D / ED	A / D / ED
* Create functional delivery components for teaching and learning environment * Provide targeted professional development (scaffolding)	* Collaborate with teacher to assess outcomes of functional components * Where appropriate, enhance delivery environment and/or scaffold online teaching and learning behaviors	* Modify (add or remove) resources, activities and/or strategies based on evaluative feedback

A   = Academic
D   = Designer
ED = Educational Designer

Peer review and feedback

Evaluation and feedback

Figure 2.4 Three-Phase Design Model & Scaffolding (Sims and Jones, 2002, p. 4)

Phase 1: Functionality

Similar to the first three components of ADDIE Model, the aim of this phase is to analyze problems, design learning objectives, and develop an online learning environment that is appropriate to be employed to enhance students' learning. A teacher plays a major role as a provider and designer who prepares learning resources for students and introduces the created online environment to them. Sims and Jones (2002) state, "In this way, the academic who has minimal experience with online teaching and learning environments has a relatively easy introduction to the environment" (p. 5). Importantly, in order to make online learning and teaching effective and successful, each member has to be aware of their responsibilities, including roles of teachers, designers, and learners, and assist one another in a team for proficient learning outcomes.

Phase 2: Enhancement

This phase is to put the instructions into practice, perceived as the implementation, and the data collected from both teachers and students can be used to evaluate the effectiveness of online environments. Besides, the conceptualization can take place during the course delivery in this phase. The feedback from teachers and learners is used to modify instructions while the delivery is still continued. It means that in this phase the implementation and the evaluation are carried out together with the collaboration of team members to enhance their learning effectiveness which can be done repeatedly until the learning goals are complete.

Phase 3: Maintenance

When the course is implemented successfully, the instructions, the contents, and online learning activities are sustainably maintained and can be promptly implemented with a group of learners until a formal review of the course is required by teachers or learners.

As can be seen, since the SMCD Model is also an online technology-based model, some of the components used are therefore derived from the two aforementioned instructional design models.

2.13 Brahmawong's Seven-Step Model for R&D Prototype Development

Theoretically, an effective model has to be created based on particular steps of model development. The SMCD Model used in this study was also systematically developed following the Brahmawong's Seven-Step Model of R&D Prototype Development. All the seven steps are presented in 2.5 below.

Table 2.5 Brahmawong's Seven-Step Model for R&D Prototype Development
(Brahmawong and Vate-U-Lan, 2009, p. 9)

Step I:	Review of related body of knowledge through documentary research (DR), interviews, field visits, and Internet searches on the R&D Prototype;
Step II:	Conduct a survey of need assessment on the R&D Prototype (First Survey);
Step III:	Develop the Conceptual Framework of the R&D Prototype;
Step IV:	Survey of experts' opinions through questionnaires, Delphi Technique, or a focus group (Second Survey);

Step V:	Develop the first draft of the R&D Prototype making use of the knowledge and information crystallized from Steps I, II, and III.
Step VI:	Seek Experts' verification of the prototype OR conduct developmental testing of the R&D Prototype: Tryout and Trial Run
Step VII:	Revise and Finalize the R&D Prototype

2.14 Web 2.0 for Online Collaborative Discussion (OCD)

Since 2005, a new suite of technological innovations facilitating distance communication through email, forums, blogs, and spaces to share photos, videos, files, and so forth among online friends has emerged. As derived from Web 1.0, it was therefore called Web 2.0. At present, the term Web 2.0 may not be familiar to many users as they still wonder what it is like when they are told about it. As a result, an introduction to Web 2.0 technology is required.

2.14.1 An Introduction to Web 2.0 Technology

Web 2.0 technology, also referred to as Web 2.0 applications, performs its function as a communicative medium, connecting a large number of people and creating online communities. Nowadays, individuals can independently exchange their opinions and knowledge through Web 2.0 technological services (Erpenbeck & Sauter, 2007).This up-to-date technology consists of some Internet applications, for example, "social networking, wikis, folksonomies, virtual societies, blogging, multiplayer online gaming and mash-ups" (Selwyn, 2008, p. 4). Owing to the development of connectivity and communicative technology in the age of globalization, the roles of face-to-face activities such as studying, discussing, conferencing, shopping, daily chatting, for example, are reduced as mentioned. Web

2.0 technology has been used increasingly worldwide. In a nutshell, Web 2.0 technology is distinguished from other Internet applications and software programs in that it provides users with a wide range of social networking sites such as MySpace, Facebook, Twitter, to name a few, and promotes online peer-to-peer interaction and discussion (Crook, 2008; Poole, 2008). Also, Blees and Rittberger (2009) state that Web 2.0 can be defined as a new technology which makes the Internet or the cyber world more exciting, interesting and socializing.

In the area of writing, Web 2.0 has also received much attention as the amount of research in relation to using Web 2.0 in a writing class has been increasing recently. Bryant (2006) finds that using Web 2.0 offers learners opportunities to collaborate and freely discuss school tasks through social networking media outside the conventional classrooms. Ullrich et al. (2008) also supports that the use of Web 2.0 encourages the practical application of constructivist theory and online collaboration, in that teachers and learners make use of the new Internet resources to enhance their learning achievements. Due to the usefulness of Web 2.0 in teaching L2 writing, Kerres (2007) identifies four outcomes obtained from employing a Web 2.0 environment in a language setting as follows: 1) Openness, 2) Participation, 3) Motivation, and 4) Monitoring, feedback and evaluation. According to Crook (2008), the effects of Web 2.0 on teaching and learning are divided into four dimensions: Collaboration, Publication, Literacies, and Inquiry. Therefore, a teacher, apart from giving lectures, should create an online environment in order to provide spaces for students to share ideas and exchange knowledge, which is considered as the genuine integration of traditional teaching styles and learning technologies (The Metiri Group, 2009). In accordance with Crook and Kerres, the central matters of Web 2.0

technologies for teaching L2 writing are collaboration and participation generated by learners themselves.

2.14.2 The Implementation of Social Networks for OCD

Social networks are one of the Web 2.0 applications, allowing people to stay in contact with one another. Nowadays, various social networking services, all of which are comparatively different according to their functions and purposes of use, have been developed and promoted for Internet users. A social network also offers advantages to individuals to look for online friends sharing the same interests and personal information and to create their own online communities (Franklin & Harmelen, 2007; Maloney, 2007). Social networks are also called a read/write web due to the fact that this sort of website does not only permit users to write an article but also allows them to edit their papers anytime. Hence, online conversations can be made at all times through these services. Wagner (2006) states that a social network is advantageous not only to the general public but also to students especially those studying at high school and university levels; in addition, Wagner describes the benefits of the read/write web as follows:

1. The read/write web is engaging and motivating.
2. The read/write web provides a context for learning.
3. The read/write web facilitates inquiry.
4. The read/write web provides a framework for collaboration.
5. The read/write web supports reflection. (p. 4)

According to the benefits as mentioned by Wagner, it is also widely known that social networks and read/write web applications are very popular among students and teachers in the academic contexts. Hewitt and Forte (2006) found that a number of lecturers have recently employed social networks as a means to connect with their students, since at present, a great number of students have engaged themselves in

social networking applications like MySpace and Facebook. The reason why a social
network is widely used is that it provides users with multifunctional spaces that can be
used to chat and to share information, including files in forms of images, audio clips,
and videos, which is absolutely connective and interactive (Selwyn, 2008). Therefore,
to employ a social network service as a tool to enhance the potential of teaching and
learning in schools is feasible because it is already widely used socially , and based on
the theory of social constructivism, it can encourage an online discussion among
learners. Additionally, social networking websites like MySpace and Facebook are so
well-known that most teenagers have already subscribed as members. Therefore, to
make use of this technological tool is considered simple because both learners and
instructors are accustomed to it. According to Lenhart and Madden (2007, cited in
Attwell, n.d., p. 6-7), the surprising percentages of members using MySpace and
Facebook are presented as follows:

1) 55% of online teens in the USA have created a personal profile
   online, and 55% have used social networking sites like MySpace and
   Facebook.
2) 66% of teens who have created a profile say that their profile is not
   visible to all internet users.
3) 48% of teens visit social networking websites daily or more often;
   26% visit once a day, 22% visit several times a day.
4) Older girls ages 15-17 are more likely to have used social networking
   sites and created online profiles; 70% of older girls have used an
   online social network compared with 54% of older boys, and 70% of
   older girls have created an online profile, while only 57% of older
   boys have done so.

It is therefore fair to say that Facebook as an example of a social network, one of the
Web 2.0 technologies, can be appropriately and easily adopted for the teaching of
writing.

Due to the usefulness and pre-existing popularity of social networking sites, many writing teachers have made use of them in order to enhance students' writing proficiency. White (2007) studied the use of Facebook to improve learners' motivation and academic writing ability. This research was conducted in Japanese contexts, in which grammar translation method was very much still in use. Facebook was employed as a medium for assigning homework. The instructor and the students, during the experiment, had more opportunities to interact through personal emails to give and to receive feedback, while the students could discuss among friends about assignments and could confidently write with more complicated language structures. The result revealed that using Facebook certainly enhanced students' motivation and encouraged the students' collaboration in a writing class, which was considered important to their writing improvement.

Kelley (2008) examined the effect of blogs on students' attitudes towards an academic writing course. The participants were second language students whose native language was not English. The researcher posited that using blogs could reduce the gaps between the teacher and the students because more opportunities for collaboration and discussion were offered. Also, he believed that writing through weblogs could create students' positive attitudes with regards to sense of class community and self-responsibility, which, at last, led to writing enhancement. The qualitative results showed that blogs were perceived to be one of the social networking tools that facilitated the students' writing practice; that is to say, blogs were viewed by the students as an educational technology that enhanced students' L2 writing, particularly in an academic writing class, since the students' writing quality, after the experiment, had significantly improved.

Woo et al. (2011) conducted a case study, in which a wiki was used to scaffold primary-school students' collaborative writing, in Hong Kong. Eight primary students were selected to participate in a focus-group discussion, using a wiki to post their works and provide good collaborative interaction with one another. The study focused on three issues, consisting of education, social collaboration, and technology. The results indicated that the students enjoyed working on wikis; furthermore, they believed that wikis could encourage their scaffolding learning and collaboration among peers. More importantly, the students' creativity was not confined to the classroom. Because of the use of wikis in this study, the students' writing performance was apparently developed, and word count increased in their writing. The researchers also insisted that the use of the wiki "helped facilitate students to engage collaboratively in creative problem solving and peer critiquing" (Woo et al., 2011, p. 53). Through social networks, student writers can provide discussion platforms to share and exchange what knowledge they have got so as to widen their own existing knowledge. Thus, social networks can be seen as a new technological instrument dealing with the limitations of time and distance in educational contexts, and may also overcome imagination confinement.

Based on the demonstrated feasibility and advantages of social networks, a social network (in this case Facebook) was selected to be used for an online collaborative discussion (OCD) in the present study. Since this technology is relatively new, few studies in relation to using Web 2.0 to improve students' writing are still rare; moreover, most of them emphasize the improvement of writing skills in general but not necessarily the reduction of grammatical errors in L2 writing. As a result, herein lies the challenge for the researcher to prove how an online collaborative

discussion via a social network affects EFL students' writing and whether it helps reduce grammatical errors in their writing.

2.14.3 Facebook: The Largest Social Networking Site for Online Collaborative Discussion (OCD)

In order to justify why Facebook was selected as an online instrument employed in the present study, some important facts and studies concerning the use of Facebook are presented. Over the last few years, Facebook has been broadly used worldwide by over 500 million users because of its high capability to prepare spaces for sharing profiles and information, sending messages and email, and communicating with friends. Constant Contact, Inc. (2010, p. 4) describes the evident commercial advantages of Facebook as follows:

- The user base is huge, and that means many of your customers and constituents are already there.
- It's easy to use.
- You can post any type of multimedia content, including videos, photos, and links to external content.
- You can separate your personal and professional use.
- You don't need a personal profile to set up a Facebook Page for professional use.

As stated above, Facebook is considered beneficial to a wide range of customer types from business people, college students, scholars, and the general public. It can be useful for a variety of purposes such as commercial advertisements, entertainment, communication, education, and so forth. To illustrate this, the National School Board Association (U.S.) (2007) reported that 96% of American teenagers were already using social networking sites for various purposes, and that as many as 50 % of them were using the websites to discuss their school tasks.

Facebook can also be used for educational purposes, and some scholars have conducted studies on the implementation of Facebook for teaching and learning activities. Chou and Chen (2008) investigated the engagement in online collaborative learning by using a Web 2.0 tool with fifty college students. During the two-week experiment, the participants were allowed to discuss and exchange knowledge through the online program selected by the researchers. The qualitative results indicated that the use of online collaboration via a social networking website seemed to enhance learners' motivation.

Muñoz and Towner (2009) investigated the advantages of employing Facebook as a means for classroom discussions among students. In their study, Facebook applications such as profile page, creating a group page, and other applications were used in order to facilitate students' discussions on particular assignments. The researchers urged others to consider that Facebook was one of the technologies that has particularly changed teaching and learning styles in traditional classrooms. That is, Facebook could break the boundary of students' creativity, which was confined only in the class, and also encouraged the student-centered approach. After the implementation of Facebook, the students' interaction, active learning, and learning attempts were apparently improved.

In conclusion, there is considerable justification for Facebook to be used in the present study due to the following reasons:

1) Facebook is a famous social networking website used worldwide, and its functions, including personal profile identification, community management, blogging, and comment posting, are not too complicated.

2) According to studies by both Chou and Chen (2008), and Muñoz and Towner (2009), Facebook does encourage learners' online collaborative discussion as it satisfies users in terms of entertainment and usefulness.

3) There have been very few qualitative studies on using Facebook as a technology to enhance students' language skills. For example, no research has been conducted to examine whether the implementation of online collaborative discussions, either on Facebook or other online forums, practically helps reduce grammatical errors in students' writing. Therefore, this is considered both a challenge and an opportunity to extend current research into this area.

2.15 Conceptual Framework of the Present Study

Based on the review of the related literature presented earlier in this chapter, the conceptual framework of this present study was created as shown in Figure 2.6.
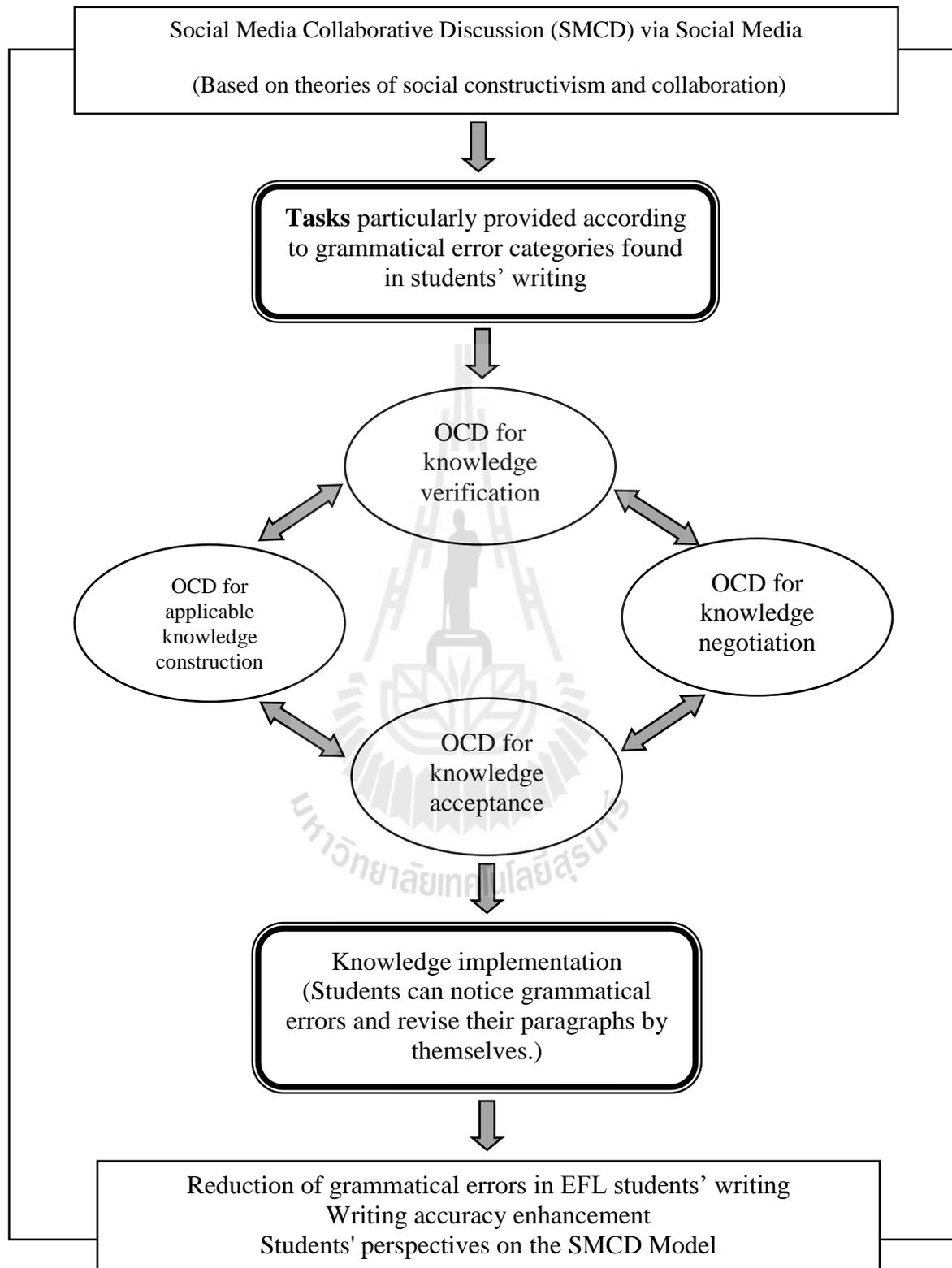
Figure 2.5 Conceptual Framework of the Study

2.16 Summary of the Chapter

Since this study focused on grammatical errors presented in EFL students'
writing and grammatical error reduction by employing online collaborative discussion
(OCD) via Facebook, Chapter Two therefore provides three major subjects, which are
background of errors in L2 writing, two related learning theories: social
constructivism and collaboration, and informative background of technology
enhanced L2 writing, emphasizing online learning and Web 2.0 applications.

In reality, writing problems are varied, ranging from organization, idea
generation, vocabulary, grammatical structures, punctuation, and so on, but the focus
of this research was only on grammatical and lexical errors, considered a chronic
problem of students learning a foreign language. According to the contents
concerning writing difficulties and grammatical errors in EFL students' writing
reviewed in this chapter, it is found that in order to identify grammatical error
categories, an appropriate technique that should be used is Error Analysis. In addition,
with regards to the studies conducted in Thailand and in other contexts in relation to
L1 interference and grammatical errors in L2 writing, all of them focus on errors
found in a particular genre. However, the researcher of this study posited that the
frequency of error commitment of each error category might be different, depending
on the nature of genres. To find out what common error types were, this study looked
at the most frequent errors within each genre. Thus, in order to prove this, which was
the first research gap of the present study, three genres, namely narration, description,
and comparison/contrast were selected.

In order to reduce grammatical errors, an online collaborative discussion
through a social network was employed as a primary treatment. It is believed that

when learners collaboratively discuss and help one another complete the assigned tasks, the construction of knowledge is created. This is based on the theories of social constructivism and collaboration, which are also reviewed in this chapter. Why do students have to do it online? The answer is that owing to the advancement of technology, learning effectiveness is enhanced, and learners keep themselves away from the traditional classrooms; that is, through online technologies, learners can study anywhere and anytime. To examine the effects of online collaborative discussions on the reduction of grammatical errors in L2 writing, this study was therefore conducted. More importantly, using Facebook in a writing course is still an innovative and welcome approach. It is certain to say that there has been no prior research on using a social network to reduce grammatical errors in students' L2 writing. Hence, it has become both a challenge and an opportunity to bring these threads of research together as a goal that is well worth proving.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology used in this study, which comprises a preliminary study on the identification of grammatical errors in L2 writing, a pilot study of a draft SMCD Model, research design, variables, participants, the writing course that was selected for the study, research instruments for data collection, construction and efficiency of the instruments, data collection procedure, data analysis, inter-rater reliability, and summary of the chapter.

3.2 Preliminary Study on the Identification of Grammatical Error Categories in L2 Writing

3.2.1 Data Collection

Even though grammatical errors are commonly found in EFL/ESL writing as often stated in Chapter 2, the error types, of course, are different according to each particular context. Hence, prior to the genuine data collection in terms of error categories in EFL students' writing, a preliminary study is required to identify and classify these error types. The selected subjects were 40 second-year English major students, registered for a writing course called Writing Strategies in English (2102206) in Semester 2 of the academic year 2010 at the Faculty of Humanities and

Social Sciences, Thepsatri Rajabhat University, Lopburi, Thailand. All of the students had already taken and passed two grammar courses, English Structure in Use, and English Structure in Context.

The participants were assigned to write three paragraphs in three genres, namely narration, description, and comparison/contrast, of at least 150 words each. The selection of genres was based on the course syllabus of Writing Strategies in English. Typically, these genres are required for Thai student writers studying paragraph writing. The three topics were (1) My Memorable Trip, (2) My Ideal House, and (3) Watching News on Television vs. Reading News from a Paper (see Appendix A). One hour each day was allotted for each paragraph, and a textual/electronic dictionary was allowed. The procedure of data collection is presented in Figure 3.1.
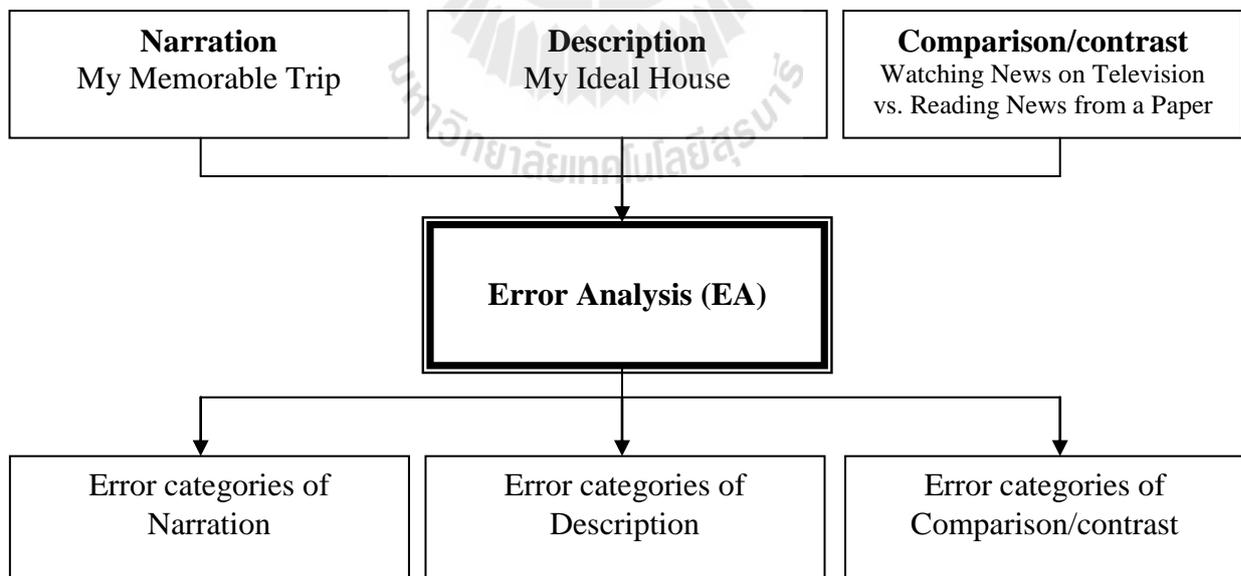
Figure 3.1 Procedure of Data Collection

3.2.2 Data Analysis

The collected paragraphs were analyzed line by line in order to detect errors for grammatical error categorization, using Error Analysis (EA), already mentioned in Chapter 2. The descriptive statistics used in this study were frequency, mean scores, and percentage.

With regards to the analysis of 120 pieces of writing in the three genres, 16 error categories were found. These were *verb tense, word choice, sentence structure, article, preposition, modal/auxiliary, singular/plural form, fragment, verb form, pronoun, run-on sentence, infinitive/gerund, transition, subject-verb agreement, parallel structure, and comparison structure.* Although all the three genres shared the same characteristics in terms of error categories, there was a difference in the frequency of errors made as claimed. The analyzed data of each writing genre are presented in Tables 3.1-3.3 below.

Table 3.1 Grammatical Errors Found in Narrative Writing

Error categories	Frequency	Mean	Percentage
Verb tense (VT)	382	9.55	26.98
Word choice (WC)	178	4.45	12.57
Sentence structure (SS)	150	3.75	10.59
Article (Art)	140	3.50	9.89
Preposition (Prep)	114	2.85	8.05
Modal/Auxiliary (Mod/Aux)	88	2.20	6.21
Singular/Plural form (Sing/Plu)	85	2.12	6.00
Fragment (Frag)	60	1.50	4.24
Verb form (VF)	50	1.25	3.53
Pronoun (Pron)	49	1.22	3.46
Run-on sentence (RO)	44	1.10	3.11
Infinitive/Gerund (Inf/Ger)	27	0.67	1.91
Transition (Trans)	25	0.62	1.77
Subject-verb agreement (SV)	13	0.33	0.92
Parallel structure (Parallel)	6	0.15	0.42
Comparison structure (Comp)	5	0.13	0.35
Total	1,416	35.40	100

According to the data as shown in Table 3.1, it can be seen that verb tense was the most frequent error made by the participants because there were no inflected past tense verbs in the Thai language. Therefore, when narrating a story, they tended to use present verbs in their narrative writing when the past tense was expected. To make it clear between verb tense and verb form, verb tense is the use of tenses according to the time of action or state of being such as present, past, or future tenses, while verb form is the use of correct forms of verbs in accordance with a particular tense, including regular and irregular verb forms. Apart from verb tense (26.98%), the other error categories were word choice (12.57%), sentence structure (10.59%), article (9.89%), preposition (8.05%), modal/auxiliary (6.21%), singular/plural form (6%), fragment (4.24%), verb form (3.53%), pronoun (3.46%), run-on sentence (3.11%), infinitive/gerund (1.91%), transition (1.77%), subject-verb agreement (0.92%), parallel structure (0.42%), and comparison structure (0.35%), respectively.

Table 3.2 Grammatical Errors Found in Descriptive Writing

Error categories	Frequency	Mean	Percentage
Article (Art)	294	7.35	20.90
Sentence structure (SS)	192	4.80	13.65
Word choice (WC)	177	4.42	12.58
Singular/Plural form (Sing/Plu)	149	3.72	10.59
Subject-verb agreement (SV)	115	2.88	8.17
Modal/Auxiliary (Mod/Aux)	77	1.92	5.47
Preposition (Prep)	70	1.75	4.98
Run-on sentence (RO)	60	1.50	4.26
Infinitive/Gerund (Inf/Ger)	55	1.38	3.90
Verb form (VF)	50	1.25	3.55
Pronoun (Pron)	40	1.00	2.84
Transition (Trans)	39	0.98	2.77
Fragment (Frag)	35	0.87	2.49
Parallel structure (Parallel)	35	0.87	2.49
Verb tense (VT)	14	0.35	1.00
Comparison structure (Comp)	5	0.13	0.36
Total	1,407	35.18	100

As shown in Table 3.2, unlike narrative writing, verb tense was not perceived as the most frequent error in descriptive writing since the students rarely made errors in terms of tenses. It was because of the nature of descriptive writing, which required the students to express imagination regarding their ideal houses, and in this case, past tense was not needed as much as narrative writing. According to the data, the three most frequent errors were article (20.90 %), sentence structure (13.65%), and word choice (12.58%), relatively similar to narrative writing. Interestingly, singular/plural form (10.59%), and subject-verb agreement (8.17%) also became students' problems when writing descriptive paragraphs. Because of the writing topic assigned "My Ideal House", the student writers had to describe what their ideal houses were like by using a lot of nouns and simple present verbs. Consequently, the misuses of article, singular/plural form, and subject-verb agreement were consistently seen in their paragraphs. Besides the aforementioned error categories, the other error types found in descriptive writing were modal/auxiliary (5.47%), preposition (4.98%), run-on sentence (4.26%), infinitive/gerund (3.90%), verb form (3.55%), pronoun (2.84%), transition (2.77%), fragment (2.49%), parallel structure (2.49%), verb tense (1%), and comparison structure (0.36%).

Table 3.3 Grammatical Errors Found in Comparison/Contrast Writing

Error categories	Frequency	Mean	Percentage
Singular/Plural form (Sing/Plu)	237	5.92	16.95
Word choice (WC)	185	4.63	13.23
Article (Art)	184	4.60	13.16
Subject-verb agreement (SV)	169	4.23	12.09
Sentence structure (SS)	131	3.28	9.37
Preposition (Prep)	105	2.62	7.51
Infinitive/Gerund (Inf/Ger)	97	2.42	6.94
Modal/Auxiliary (Mod/Aux)	68	1.70	4.86
Run-on sentence (RO)	47	1.18	3.36
Comparison structure (Comp)	46	1.15	3.29

Error categories	Frequency	Mean	Percentage
Verb form (VF)	28	0.70	2.00
Transition (Trans)	25	0.62	1.79
Parallel structure (Parallel)	23	0.58	1.65
Pronoun (Pron)	21	0.52	1.50
Fragment (Frag)	18	0.45	1.29
Verb tense (VT)	14	0.35	1.00
Total	1,398	34.95	100

As can clearly be seen from the data in Table 3.3, a genre significantly affects error types. In narrative and descriptive writing, comparison was the least frequent error the students made in their written work. On the other hand, when they were assigned to write a comparison/contrast paragraph, some errors regarding comparison structure were constantly made as they needed to use comparative patterns to express their thoughts. Not surprisingly, singular/plural form (16.95%), word choice (13.23%), article (13.16%), subject-verb agreement (12.09%), and sentence structure (9.37%) were still the five most frequent errors, somewhat similar to narrative and descriptive writing. The other common error types found in comparison/contrast writing were preposition (7.51%), infinitive/gerund (6.94%), modal/auxiliary (4.86%), run-on sentence (3.36%), comparison structure (3.29%), verb form (2%), transition (1.79%), parallel structure (1.65%), pronoun (1.50%), fragment (1.29%), and verb tense (1%), respectively.
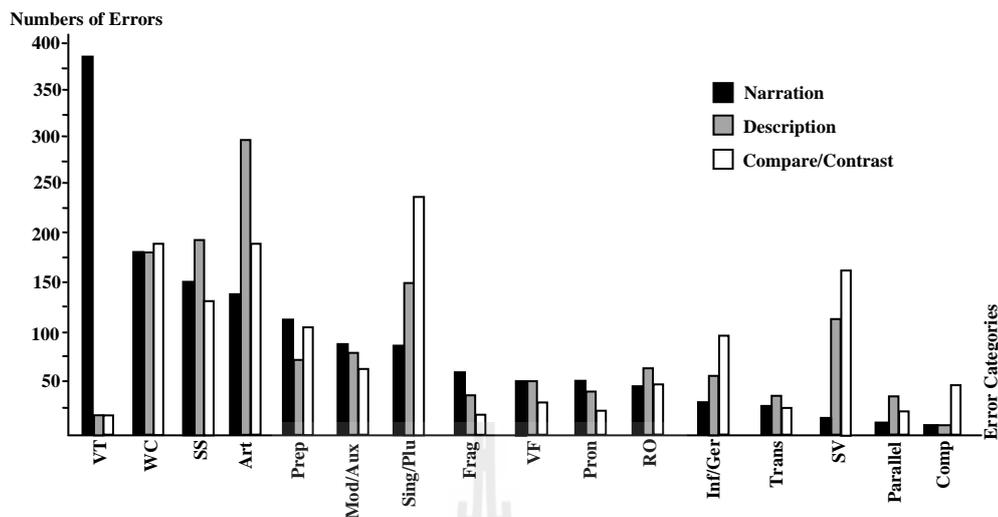
Figure 3.2 Comparison of Error Types Found in Three Genres

In general, not only does a writing teacher provide feedback according to the errors he/she has seen in students' written work, but also a grammar lesson based on the errors found can be more effectively prepared in accordance with a writing genre being taught. As seen in Figure 3.2, the error categories of narrative, descriptive, and comparison/contrast writing genres are compared and presented. This indicates that, in narrative writing, an intensive teaching focus should be on verb tense, while subject-verb agreement should be the focus of descriptive and comparison/contrast writing. Overall, among these three genres, word choice, sentence structure, preposition, verb form, run-on sentence, modal/auxiliary, and transition are seen to occur comparatively equally. In description, the use of articles and word choice become the first two error types that should be taught to L2 student writers. It may be because of the topic assigned to the participants to write as they were required to use a lot of nouns and adjectives in order to describe their ideal houses. Since the Thai language has few or no articles or determiners in front of nouns, this error category emerges as a frequent writing problem for Thai students. In terms of

comparison/contrast writing, comparison structure errors arise the most, compared to the other two genres. Therefore, it is necessary to emphasize this structural feature when teaching L2 students to write comparison/contrast paragraphs.

In sum, although there is considerable overlap in the common errors, the number of errors associated with specific categories varied, depending on a particular genre. In order to provide good feedback for students' writing, error categories of each text type should be taken into consideration.

3.3 Pilot Study of a Draft SMCD Model

Prior to the full study, a draft model of Social Media Collaborative Discussion (SMCD) was piloted to see whether or not it worked appropriately in a genuine context. Only 20 participants of the 40 subjects used in the preliminary study were selected for piloting the SMCD Model, since they were sampled to represent the low (lower than 2.00), moderate (2.00-3.00), and high (higher than 3.00) levels of English proficiency, considered from their GPAX of all the English courses taken. The schedule of the pilot study is illustrated in Table 3.4.

Table 3.4 A Planned Schedule of the Pilot Study

Week	In-class activities	Online activities
1	- Writing lessons with regards to content and organization - The students were asked to write a paragraph of at least 150 words on 'My Most Embarrassing Moment'.	-
2	Facebook registration , orientation, and comment preparation training	-
3	-	Online Task 1
4	-	Online Task 2
5	-	Online Task 3

Week	In-class activities	Online activities
6	- The students submitted the revised paragraphs (My most embarrassing moment) and got feedback from the researcher in class. - Ten students were interviewed by the researcher regarding the online activities based on the model of social media collaborative discussion (SMCD)	-

In Week 1, the participants were taught elements of a good paragraph pertaining to idea generation, content, and paragraph organization. In doing this, the extraneous variables could be controlled due to the fact that the present study emphasized on only grammatical accuracy and the reduction of grammatical errors in L2 writing. Then, the participants were assigned to write a 150-word paragraph on "My Most Embarrassing Moment" within one hour. The students were allowed to consult their paper/electronic dictionaries.

In Week 2, the participants signed up for Facebook and added the researcher into their "Friend" directories. In addition, the students were also trained how to provide comments for online collaborative discussion. The characteristics of online tasks and how to submit each weekly task were explained to the participants as well.

From Weeks 3-5, the participants worked online through Facebook as they collaboratively discussed the provided online tasks, which were created based on the most frequent error categories found in the students' writing. In this pilot study, only three error types were covered in Online Tasks 1-3: verb tense, subject-verb agreement, and singular/plural form, respectively. Each task was given on Facebook at the beginning of the week, and the participants had five days to discuss, share, and exchange what knowledge they had and had gained. At the end of each week, they submitted completed tasks to the researcher via Facebook Messages and wrote diaries

with regards to what they had learned and what knowledge they had obtained from the online collaborative discussions.

In Week 6 of the pilot study, the participants were present in the class to submit their revised paragraphs, which they had written in the first week, to see how effectively they made use of knowledge gained from the discussions to revise their own written works . After that, 10 participants, who made the greatest contributions in terms of both the quantity and quality of their comments during the online discussions, were interviewed to elicit their perspectives towards online collaborative discussion via Facebook and to investigate what problems they had encountered during the OCD activities. The data obtained were used to refine the SMCD Model for the main study (see Appendix D for semi-structured interview questions). The results of the interview with the ten participants revealed the following observations:

1. All the students were satisfied with the online collaborative discussion activities because Facebook was a trendy and enjoyable means for communicating with friends online. The SMCD activities also helped enhance their writing accuracy in terms of grammatical structures. Student 1 stated, "I feel comfortable to work with friends on Facebook. It is convenient for me as I stay online every day".

2. Nine participants agreed that online discussions through Facebook were much better than face-to-face discussions because they had plenty of time to provide discussions, comments, and various online sources to help them review their existing knowledge with friends. However, they suggested that the group be smaller, 10 if possible, so that everyone would have equal opportunities to share their comments. Only one participant believed that an in-class discussion was somewhat better because she could give and receive face-to-face feedback immediately. Student 2 mentioned,

"I can learn more when discussing online tasks with friends. If I am not sure with my discussions, I can find out the answers from the Internet easily. It is much better than face-to-face discussion because I do not have time to prepare myself for a particular answer".

3. All the participants expressed positive attitudes towards the OCD activities. They said that an integration of technology for language teaching and learning enhanced their writing accuracy.

4. All of the participants found the online tasks appropriate and not too difficult to do since each task was devoted to only one error category. Student 3 said, "An online task provided by the teacher is not confusing because it includes only one grammar point. I know what I have to focus when discussing in the group".

5. Overall, the participants believed that social media collaborative discussion (SMCD) via Facebook was advantageous for their writing enhancement. With it, they could notice errors in their works written in Week 1 and make changes accordingly. Student 4 explained,

> *After the discussions on Facebook, I understand some grammatical rules more, which I can use to revise my paragraph. For example, in my paragraph that I wrote in Week 1, "I don't understand what my father say, so I talk to him again last night." I changed from present tense to past tense in this sentence. The revised one is "I didn't understand what my father said, so I talked to him again last night".*

Besides, some of them claimed that they would not make errors regarding verb tense, subject-verb agreement, and singular/plural form again when writing a new paragraph.

All in all, this pilot study proved that the knowledge gained through the SMCD activities helped them reduce grammatical errors in their writing, since the students could correct some errors, related to the grammatical rules they had discussed with their group members in the online discussion process, somewhat effectively. A task designed to deal with a particular error category and a small group of 7 members were appropriate for the SMCD process. It was assumed that this draft model would be worth employing in the main study with more writing genres and a larger number of participants.

3.4 Research Design of the Present Study

The research design of this present study was a 16-week experimental study, using an intact class with 35 students, a one group pre- and post-test design. The participants were assigned to write pre-test paragraphs and divided to work in groups of seven to discuss online tasks on Facebook, write diary entries, submit completed online tasks, and revise their pre-test paragraphs after Online Tasks 8 and 16. In week 15, the questionnaires and semi-structured interview were conducted , and then the students were asked to write post-test paragraphs in the following week. Since this study emphasized the development of the SMCD Model, the categories of grammatical errors in L2 writing, the reduction of grammatical errors after the implementation of the SMCD Model, and students' perspectives on the model, both qualitative and quantitative methods were therefore employed in order to obtain reliable results and make this study as rigorous as possible. The research design is illustrated in Figure 3.3.
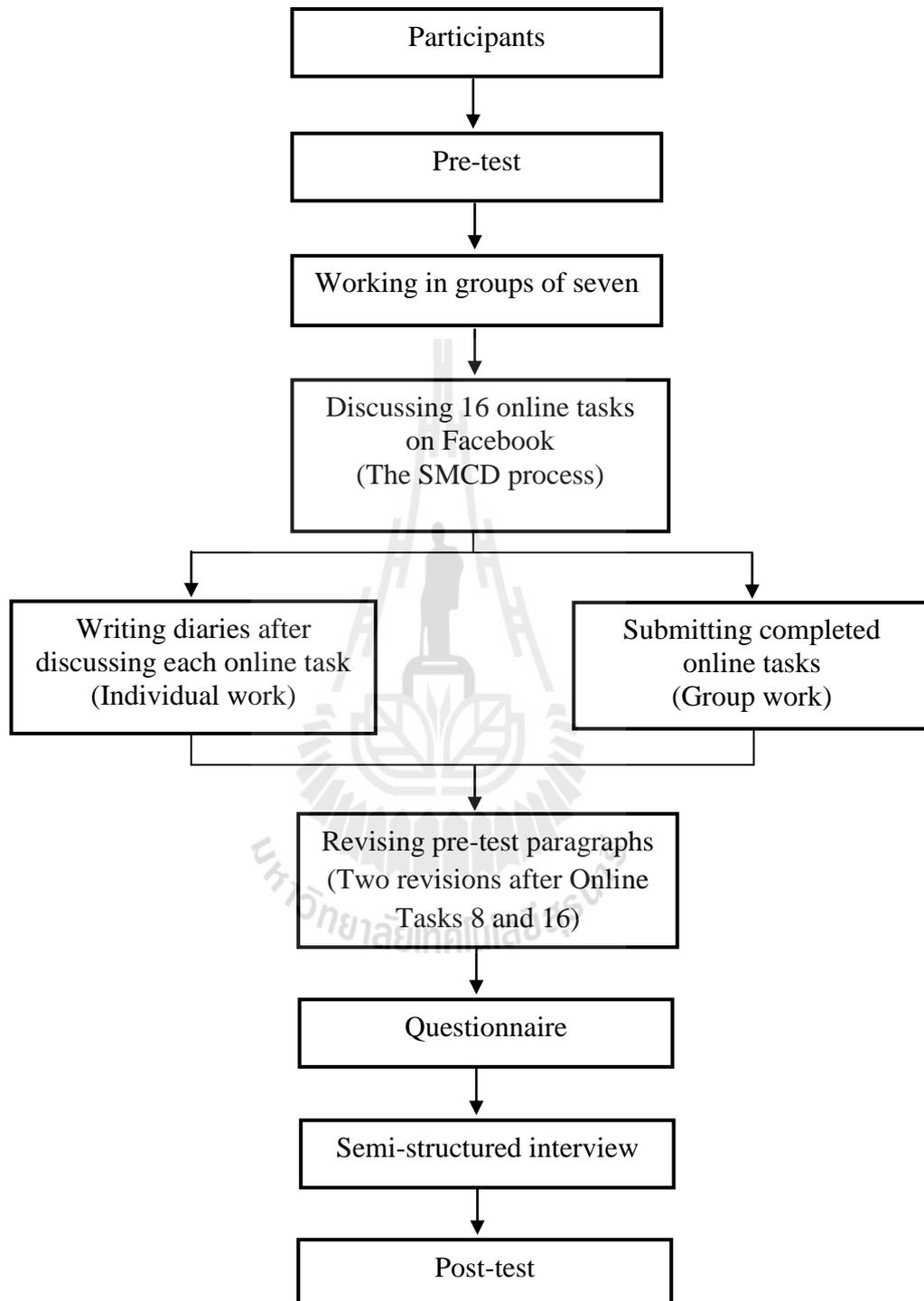
Figure 3.3 Research Design

3.5 Variables

As shown in the research design, the conceptual framework of this study indicated two major types of variables: independent and dependent variables. The independent variable of this study was online collaborative discussion on Facebook. The dependent variables affected by the independent variable were the reduction of grammatical errors in students' writing and the students' perspectives towards the SMCD Model.

3.6 Participants

The purposively selected participants of this study were 35 second-year English major students registered for a writing course called Writing Strategies in English (2102206) in the second semester of the academic year 2011 at the Faculty of Humanities and Social Sciences, Thepsatri Rajabhat University. Their characteristics were identical to the ones used in the pilot study in terms of their English background, the courses they had taken, and the same writing course used in the study. The only difference was that they were in a different academic year.

According to the results from the students' needs and the pilot study of the SMCD Model, the subjects were divided into five groups of 7 members each with mixed English ability, based on their GPAX of every English course taken, so that the strong ones could support the weak ones in terms of knowledge construction. The number of members in each group is presented in Table 3.5.

Table 3.5 Classification of SMCD Groups Based on Students' GPAX

SMCD Group	Level of English	GPAX	Number of Students
1	Low	0.00-1.99	2
	Moderate	2.00-2.99	3
	High	3.00-4.00	2
2	Low	0.00-1.99	1
	Moderate	2.00-2.99	3
	High	3.00-4.00	3
3	Low	0.00-1.99	2
	Moderate	2.00-2.99	2
	High	3.00-4.00	3
4	Low	0.00-1.99	2
	Moderate	2.00-2.99	3
	High	3.00-4.00	2
5	Low	0.00-1.99	1
	Moderate	2.00-2.99	3
	High	3.00-4.00	3
Total			35

3.7 The Writing Course Selected for the Study

Writing Strategies in English (2102206) is offered to second-year English major students in the second semester of every academic year. This course emphasizes basic paragraph writing, generating ideas, organizing ideas in three genres, namely narration, description, and comparison/contrast.

Since this study aimed to investigate and enhance only grammatical accuracy in L2 writing, the other two elements of content and organization were taught prior to the SMCD process so as to control the intervening variables. With regards to out-of-class or online activities, the participants were assigned online tasks on Facebook and could work with their group members anywhere and anytime under the teacher's supervision. In addition, the researcher also stayed online every day in case that the students required any urgent assistance during their discussions on Facebook.

3.8 Research Instruments for Data Collection

As this study was comprised of four main phases, the development of the SMCD Model, the identification of grammatical errors in L2 writing, the effects of the SMCD Model on the reduction of grammatical errors in L2 writing, and students' perspectives on the SMCD Model, the nature of data was thus both quantitative and qualitative, based on the four research questions as raised in Chapter 1.

3.8.1 Instruments for Quantitative Data

For the quantitative data, three research instruments were employed.

3.8.1.1 Needs Analysis Questionnaire and Model Component Assessment Questionnaire

Research Question 1 was, " What are the components in developing a model of Social Media Collaborative Discussion (SMCD) for the reduction of grammatical errors in EFL university students' writing?". To answer this question, according to the Brahmawong's Seven-Step Model for R&D Prototype Development, a needs analysis questionnaire (see Appendix C) was employed to investigate students' requirements in terms of online technology, online tasks, and components, which were used to create a draft model of social media collaborative discussion (SMCD). Also, a conceptual framework assessment questionnaire was used to evaluate the appropriateness of the model components used in the SMCD Model. Both types of questionnaires were validated for their content and suitability by three external experts, all of whom have had experiences regarding language teaching and technological innovation for over 15 years at Thepsatri Rajabhat University, and Kasetsart University, Bangkhen Campus.

3.8.1.2 Pre-and Post-Tests

Research Question 2 was, " What are the grammatical error categories identified from the three types of genres, namely narration, description, and comparison/contrast?", and Research Question 3 was, " What are the effects of the SMCD Model on the reduction of grammatical errors in EFL students' writing?". To answer them, pre-test assessments were administered in order to identify writing errors in the participants' written paragraphs and to examine their writing proficiency regarding syntactic accuracy. Subsequent, post-tests were administered at the end of the experiment so as to evaluate the participants' paragraphs in terms of grammatical accuracy and to see the extent to which grammatical errors in the students' writing were reduced. The six writing topics used as both pre- and post-tests are shown in Table 3.6.

Table 3.6 Six Writing Topics of Pre-and Post-Tests

Pre-tests	Writing topics
Narration	My Memorable Trip
Description	My Ideal House
Comparison/contrast	Watching News on Television vs. Reading News from a Paper
Post-tests	**Writing topics**
Narration	My Most Embarrassing Experience
Description	My Favorite Restaurant
Comparison/contrast	Learning English with a Thai Teacher vs. Learning English with a Native Speaker

A total of 105 pre-test and 105 post-test paragraphs were collected for the analysis (see Appendix E for post-tests).

3.8.1.3 Perspective Questionnaire

Research Question 4 was, "What are the students' perspectives towards the SMCD Model?". To answer, a 5-point Likert scale questionnaire, adapted from Du, Durrington, and Mathews (2007), and Choi (2008), was prepared and validated by the three aforementioned EFL experts, two from Thepsatri Rajabhat University, and one from Kasetsart University, Bangkhen Campus. The revision of the questionnaire was made based on their comments (see Appendix F).

3.8.2 Methods Used for Qualitative Data

3.8.2.1 Content Analysis

To further address Research Question 3, the participants were asked to revise their pre-test paragraphs after Online Tasks 8 and 16. Document analysis of Revisions 2 and 3 was conducted to study the changes between drafts in terms of lexical and grammatical improvement. Figure 3.4 shows the revision process using the knowledge gained from the OCD activities via Facebook.
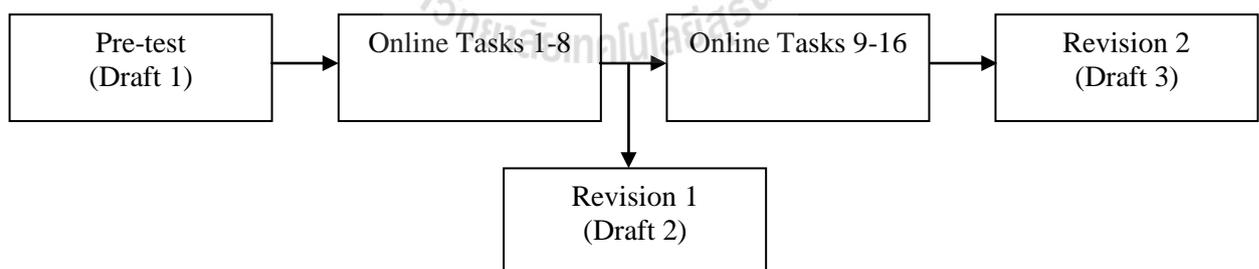
Figure 3.4 Revision Process Using Knowledge Gained

3.8.2.2 Diary

As this study focused on the knowledge constructed by the participants when collaboratively discussing and completing provided online tasks, it was, therefore, essential that the students' knowledge be verified after each task. In order to make this verification more concrete, every student was required to write a weekly diary regarding what they had learned from the online collaborative discussions and post it on Facebook Notes. The diaries were analyzed to see whether any knowledge was obtained during the OCD activities. Nunan (1992) views this qualitative method as an example of "a first person account of the experience of language learning or teaching (p. 229)." Based on this viewpoint, the diary can be used to elicit what a learner has received after a series of learning practices. In other words, the diaries revealed how the participants might view the knowledge achieved in this main study.

3.8.2.3 Semi-structured Interview

Although a questionnaire was used for the data collection in relation to opinions and attitudes on the SMCD Model, the data obtained might not be sufficient for analysis and interpretation. In order to gain more reliable data, a triangulation was essential. Creswell (2003) states that a triangulation can be done by using different research methods with the same group of subjects/samples or by collecting data from distinguished sources so as to get proper data for particular justification. Thus, in this present study, apart from the perspective questionnaires, a semi-structured interview was conducted with 15 participants, three chosen from each group, at the end of the experiment so as to get in-depth information and possible verification of survey results regarding the students' perspectives on the implementation of the SMCD Model.

The summary of the instruments and methods of each research question is presented in Table 3.7 below.

Table 3.7 Summary of the instruments used in the Present Study

Research questions	Quantitative instruments used	Qualitative methods used
1. What are the components in developing a model of Social Media Collaborative Discussion (SMCD) for the reduction of grammatical errors in EFL university students' writing?	- Needs analysis questionnaire - Model component assessment questionnaire	-
2. What are the grammatical error categories identified from the three types of genres, namely narration, description, and comparison/contrast?	- Pre-test	-
3. What are the effects of the SMCD Model on the reduction of grammatical errors in EFL students' writing?	- pre- and post-tests	- Content analysis - Diary
4. What are the students' perspectives towards the SMCD Model?	- Perspective questionnaire	- Semi-structured interview

3.9 Construction and Efficiency of the Instruments

The construction and efficiency of the research instruments used in this study, comprising the development of the SMCD Model, needs analysis questionnaire, model component assessment questionnaire, writing topics used for pre- and post-tests, perspective questionnaire, online tasks, and questions for semi-structured interview, were carried out with the consultation with five experts in teaching L2 writing and educational innovation (see Appendix K for their names and institutions).

3.9.1 The SMCD Model

The Social Media Collaborative Discussion Model was created and developed systematically based on the Brahmawong's Seven-Step Model for R&D Prototype Development as reviewed in Chapter 2. The steps of the SMCD Model development are as follows:

1. Related literature on instructional systems designs and model for online collaborative discussion was reviewed

2. A survey of needs analysis assessment was conducted for model components used in the SMCD Model.

3. A conceptual framework that was used to construct a draft SMCD Model was created.

4. The conceptual framework and the components used in the model were evaluated their appropriateness by the experts.

5. A draft SMCD Model was created.

6. The draft model was tried out with a particular group of participants.

7. The draft model was revised and finalized.

3.9.2 Needs Analysis Questionnaire

A needs analysis questionnaire was created and read to the students, who were to respond to it, to see whether they understood the meanings of the items clearly before it was sent to the experts for validation. The contents then were revised based on the experts' suggestions. The questionnaire comprised two sections: students' general information regarding the use of the Internet and their needs regarding social networks, online activities, and tasks. A process of the construction of needs analysis questionnaire is shown in Figure 3.5.
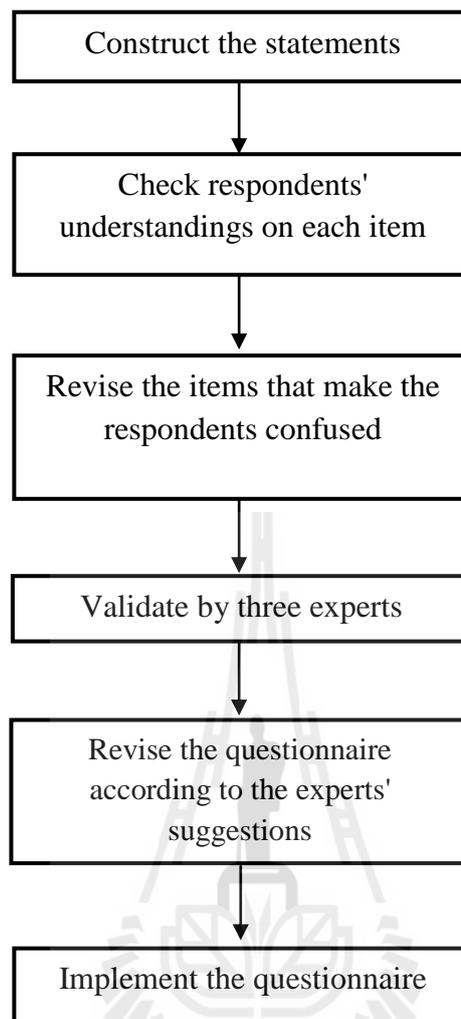
Figure 3.5 A Process of the Construction of Needs Analysis Questionnaire

3.9.3 Model Component Assessment Questionnaire

A model component assessment questionnaire was created and sent to the experts to assess its conceptual framework and components regarding the contents and suitability. The questionnaire then was revised in accordance with the experts' recommendations.

3.9.4 Perspective Questionnaire

A perspective questionnaire was constructed in order to elicit the students' perspectives on the implementation of the SMCD Model. It consisted of three main

sections. The first part aimed at examining the students' perspectives on online collaborative discussion, and the second part was used to investigate their attitudes towards Facebook used for the online collaborative discussion process. The third part was employed to elicit the students' perspectives on online tasks. Likert's rating scale with 5 points, ranging from strongly agree to strongly disagree, was used to measure the students' opinions on each item in the questionnaire (see Appendix F). After the questionnaire was constructed, it was then read to the students to check their understandings on each item. Finally, the confusing items were revised prior to the experts' validation.

The questionnaire was validated item by item by three experts from Thepsatri Rajabhat University and Kasetsart University (see Appendix K). The index of item objective congruence (IOC) was then calculated by assigning three kinds of scores as follows: appropriate = 1, uncertain = 0, and inappropriate = -1. In the present study, most of the items were rated higher than 0.5 of the IOC index between 0.66 and 1.00. It means that these items were appropriate to be used, while there were only two items rated lower than 0.50 by the experts as their contents were not relevant to the objectives of the questionnaire. Consequently, these two items were removed.

In terms of the reliability, the questionnaires were distributed to the 40 participants used in the preliminary study. The reliability of the questionnaire was checked, using Coefficient Alpha of Cronbach, and the value calculated was 0.791, considered as acceptable, since it was higher than 0.75.

```
┌─────────────────────────────────────────────┐
│            Review the literature              │
│ The questionnaire was adapted from Du, Durrington, │
│       and Mathews (2007), and Choi (2008)     │
└─────────────────────────────────────────────┘
                      │
                      ▼
┌─────────────────────────────────────────────┐
│            Construct the statements           │
│                                               │
└─────────────────────────────────────────────┘
                      │
                      ▼
┌─────────────────────────────────────────────┐
│        Check respondents' understandings      │
│                  on each item                 │
└─────────────────────────────────────────────┘
                      │
                      ▼
┌─────────────────────────────────────────────┐
│             Revise confusing items            │
└─────────────────────────────────────────────┘
                      │
                      ▼
┌─────────────────────────────────────────────┐
│        Validate the questionnaire by the      │
│                experts (IOC)                  │
└─────────────────────────────────────────────┘
                      │
                      ▼
┌─────────────────────────────────────────────┐
│         Revise/remove the items rated         │
│      lower than 0.50 of the IOC index         │
└─────────────────────────────────────────────┘
                      │
                      ▼
┌─────────────────────────────────────────────┐
│            Try out the questionnaire          │
└─────────────────────────────────────────────┘
                      │
                      ▼
┌─────────────────────────────────────────────┐
│           Implement the questionnaire         │
└─────────────────────────────────────────────┘
```

Figure 3.6 A Process of the Construction of Perspective Questionnaire

3.9.5 Writing Topics Used for Pre- and Post-Tests

Prior to coming up with the topics, the course requirements of Writing Strategies in English were studied. Six writing topics of three writing genres, namely narration, description, and comparison/contrast, used as pre- and post- tests in the study, were then constructed based on the suggestions of the experts who have been teaching writing for more than 15 years (see Table 3.6 on page 90 for details).

Study the course requirements of
Writing Strategies in English

↓

Consult the experts regarding
appropriate topics

↓

Create six topics of three writing
genres

↓

Check their suitability by the
experts

↓

Use the writing topics as students'
pre- and post-tests
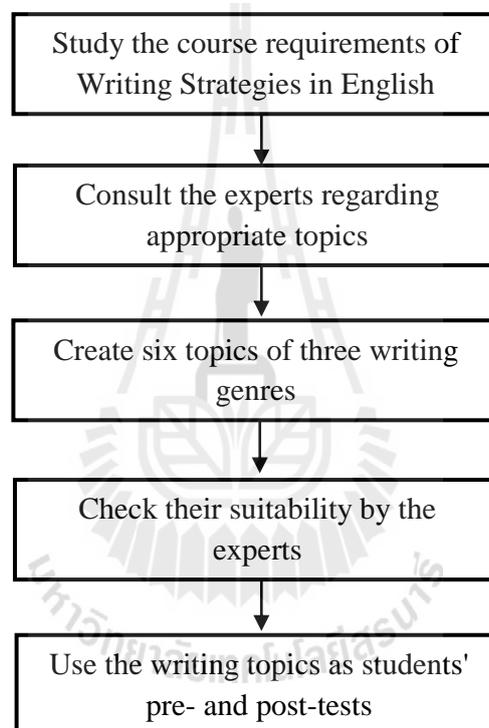
Figure 3.7 A Process of the Construction of Writing Topics

3.9.6 Online Tasks for Online Collaborative Discussion on Facebook

Online tasks in the present study were used to encourage students' online collaborative discussions on Facebook for their knowledge construction in terms of grammar. Sixteen online tasks were created based on the students' grammatical error categories found in their pre-test paragraphs. The objective of the online tasks was to

assign students to help one another find the errors and correct them at a paragraph level. In addition, due to the students' needs analysis as mentioned in Chapter 4, each online task comprised 30 - 35 errors with only one grammar point. The contents of tasks were validated by the three experts in L2 writing, and then all the 16 online tasks were revised following their comments before the implementation.

```
┌─────────────────────────────────────┐
│   Categorize error types from        │
│   students' pre-test paragraphs      │
└─────────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────────┐
│   Analyze students' needs in terms   │
│   of the number of contents          │
│   included in the tasks              │
└─────────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────────┐
│   Construct 16 online tasks based    │
│   on error categories and            │
│   students' needs                    │
└─────────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────────┐
│   Validate contents by the experts   │
│   in L2 writing                      │
└─────────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────────┐
│   Revise the online tasks according  │
│   the experts' comments              │
└─────────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────────┐
│   Implement the online tasks in      │
│   online collaborative discussion    │
│   process on Facebook                │
└─────────────────────────────────────┘
```

Figure 3.8 A Process of the Construction of Online Tasks

3.9.7 Questions for Semi-structured Interview

A semi-structured interviewed was conducted in order to elicit the students' perspectives towards the implementation of the SMCD Model. Five questions were provided by the researcher with the consultation with the experts. Ten students, used in the pilot study of a draft SMCD Model, were then interviewed for 20 minutes in order to check whether each question was ambiguous or difficult to understand. The question set was revised and added one more question, which was considered as important to elicit the students' attitudes in relation to the knowledge gained from the online collaborative discussion activities. Therefore, there were six questions used for the semi-structured interview in the main study.

3.10 Data Collection Procedure

This study was conducted during the 16-week course of Writing Strategies in English. Two types of activities, in-class and online, were used as shown in Table 3.8.

Table 3.8 A Planned Schedule of the Data Collection

Week	In-class activity	OCD activity on Facebook
1	- Class orientation - Elements of writing	-
2	- Study narrative writing - Write a paragraph on "My Memorable Trip" (To be used as a pre-test paragraph)	-
3	- Study descriptive writing - Write a paragraph on "My Ideal House" (To be used as a pre-test paragraph)	-
4	- Study comparison/contrast writing - Write a paragraph on "Watching News on Television vs. Reading News from a	-

Week	In-class activity	OCD activity on Facebook
	Paper" (To be used as a pre-test paragraph)	
5	- Subscribe Facebook - Facebook orientation for the OCD activities - Trained on how to give comments on Facebook	-
6	-	- Online Tasks 1&2 - Write a diary after the OCD - Submit the completed task
7	-	- Online Tasks 3&4 - Write a diary after the OCD - Submit the completed task
8	-	- Online Tasks 5&6 - Write a diary after the OCD - Submit the completed task
9	-	- Online Tasks 7&8 - Write a diary after the OCD - Submit the completed task
10	- Revise all the three pre-test paragraphs and hand them in as Revision 1 individually - Teacher feedback	-
11	-	- Online Tasks 9&10 - Write a diary after the OCD - Submit the completed task
12	-	- Online Tasks 11&12 - Write a diary after the OCD - Submit the completed task
13	-	- Online Tasks 13&14 - Write a diary after the OCD - Submit the completed task
14	-	- Online Tasks 15&16 - Write a diary after the OCD - Submit the completed task
15	- Revise all the three pre-test paragraphs and hand them in as Revision 2 individually - Fill in perspective questionnaires - Interviewed by the teacher	-
16	- Post-tests	-

As shown in Table 3.8, in Weeks 1-4, the participants were taught the elements of writing as well as the characteristics of three writing genres, namely narration, description, and comparison/contrast. Paragraphs on three different topics were then assigned in Weeks 2-4 as their pre-tests. Online Tasks 1-8, designed based on the first eight most frequent error categories found in the participants' pre-test paragraphs, started from Weeks 6 to 9. In Week 10, the participants were asked to revise their pre-test paragraphs as Draft 2, submit them, and attend the teacher feedback session in the class. From Weeks 11-14, Online Tasks 9-16, provided based on the other eight most frequent errors, were further administrated on Facebook. In Week 15, the participants again revised and submitted their third drafts. Furthermore, within the day, they were required to fill out the perspective questionnaires. From this, 15 students were selected from each group, to be interviewed by the researcher. Lastly, the participants were present in class again in Week 16 to write three paragraphs on *My Most Embarrassing Experience*, *My Favorite Restaurant*, and *Learning English with a Thai teacher vs. Learning English with a Native Speaker* as their post-tests. An hour was given to each paragraph, and the students were allowed to consult their textual/electronic dictionaries during the post-test session.

3.11 Data Analysis

All the data obtained were analyzed and interpreted as follows:

3.11.1 Needs Analysis Questionnaire and Model Component Assessment Questionnaire

To answer Research Question 1, 40 needs analysis questionnaires and 3 model component assessment questionnaires were employed in the process of model

development, and the data obtained were analyzed, using percentage, mean score, and standard deviation.

3.11.2 Grammatical Error Categories

To answer Research Question 2, grammatical error categories found from the participants' pre-tests were analyzed, using frequency, mean score, percentage, and standard deviation.

3.11.3 Students' Writing Accuracy

To answer Research Question 3, the participants' pre- and post-tests were analyzed and compared, employing Paired-Sample T-Test, to see whether or not grammatical accuracy in pre-tests and post-tests was significantly different.

3.11.4 Students' Linguistic Knowledge Gained from Online Collaborative Discussion

To further address Research Question 3, after the completion of online Tasks 8 and 16, the participants were asked to revise their pre-test paragraphs. Revised drafts 2 and 3 (Revisions 1&2) were analyzed qualitatively, using the content analysis method in order to examine how well they could revise their paragraphs after gaining knowledge from the OCD activities. Apart from revising their paragraphs, the participants were assigned to maintain a diary regarding the knowledge obtained from each online task and post it on Facebook Notes. The data from the students' Revisions 1 and 2 and diary entries were analyzed and presented qualitatively with some examples from the students' data in Chapter 4.

3.11.5 Perspective Questionnaire

To answer Research Question 4, the data obtained from 35 questionnaires were analyzed by using descriptive statistics: mean score and standard deviation.

3.11.6 Semi-structured Interview

To address Research Question 4, the participants' interviews were transcribed verbatim, interpreted, and presented qualitatively.

3.12 Inter-rater Reliability

When more than one person is performing a task that is subject to variations in interpretation, the reliability across raters needs to be determined. Most importantly, Othman (2010) explains that the relationship between the scores evaluated by each expert rater must be compared in order to come up with a quantifiable sense of inter-rater reliability. Therefore, in order to obtain reliable results in terms of error frequency from the students' pre- and post-tests, the researcher, together with two raters, assessed and calculated the error rates. Raters 1 and 2 were assistant professors at Thepsatri Rajabhat University who have been teaching writing courses for over 15 years. In addition, prior to analyzing and rating error frequency in pre- and post-tests, the researcher and the two raters discussed types of grammatical errors together for agreement and understandings, considered as rater training . The frequency of errors rated by the three raters were compared and analyzed, employing Pearson's correlation coefficient. Correlations among the three raters of 16 error categories are presented in Tables 3.9 – 3.24.

Table 3.9 Correlations of **Sentence Structure** Found in Pre- and Post-Tests

	Pre-test			Post-test		
	Rater 1	**Rater 2**	**Rater 3**	**Rater 1**	**Rater 2**	**Rater 3**
Rater 1	1.000	.947**	.917**	1.000	.901**	.852**
Rater 2	.947**	1.000	.879**	.901**	1.000	.831**
Rater 3	.917**	.879**	1.000	.852**	.831**	1.000

**. Correlation is significant at the 0.01 level (2-tailed)

With regards to the error rates of sentence structure in pre-tests, the levels of correlation coefficient were .879 - .947, and the levels of correlation coefficient of post-tests were .831 - .901. It was found that the correlation coefficient among the three raters were significant at the .01 level for every instance of rating of sentence structure.

Table 3.10 Correlations of **Subject-Verb Agreement** Found in Pre- and Post-Tests

	Pre-test			Post-test		
	Rater 1	**Rater 2**	**Rater 3**	**Rater 1**	**Rater 2**	**Rater 3**
Rater 1	1.000	.918**	.875**	1.000	.914**	.955**
Rater 2	.918**	1.000	.926**	.914**	1.000	.887**
Rater 3	.875**	.926**	1.000	.955**	.887**	1.000

**. Correlation is significant at the 0.01 level (2-tailed)

Regarding the error rates of subject-verb agreement in pre-tests, the levels of correlation coefficient were .875 - .926, and the levels of correlation coefficient of post-tests were .887 - .955. It was found that the correlation coefficient among the three raters were significant at the .01 level for every instance of rating of subject-verb agreement.

Table 3.11 Correlations of **Parallel Structure** Found in Pre- and Post-Tests

	Pre-test			Post-test		
	Rater 1	**Rater 2**	**Rater 3**	**Rater 1**	**Rater 2**	**Rater 3**
Rater 1	1.000	.864**	.838**	1.000	.857**	.804**
Rater 2	.864**	1.000	.937**	.857**	1.000	.781**
Rater 3	.838**	.937**	1.000	.804**	.781**	1.000

**. Correlation is significant at the 0.01 level (2-tailed)

According to the error rates of parallel structure in pre-tests, the levels of correlation coefficient were .838 - .937, and the levels of correlation coefficient of post-tests were .781 - .857. It was found that the correlation coefficient among the three raters were significant at the .01 level for every instance of rating of parallel structure.

Table 3.12 Correlations of **Singular/Plural Form** Found in Pre- and Post-Tests

	Pre-test			Post-test		
	Rater 1	Rater 2	Rater 3	Rater 1	Rater 2	Rater 3
Rater 1	1.000	.961**	.937**	1.000	.985**	.970**
Rater 2	.961**	1.000	.931**	.985**	1.000	.981**
Rater 3	.937**	.931**	1.000	.970**	.981**	1.000

**. Correlation is significant at the 0.01 level (2-tailed)

With regards to the error rates of singular/plural form in pre-tests, the levels of correlation coefficient were .931 - .961, and the levels of correlation coefficient of post-tests were .970 - .985. It was found that the correlation coefficient among the three raters were significant at the .01 level for every instance of rating of singular/plural form.

Table 3.13 Correlations of **Word Choice** Found in Pre- and Post-Tests

	Pre-test			Post-test		
	Rater 1	Rater 2	Rater 3	Rater 1	Rater 2	Rater 3
Rater 1	1.000	.924**	.969**	1.000	.929**	.878**
Rater 2	.924**	1.000	.891**	.929**	1.000	.826**
Rater 3	.969**	.891**	1.000	.878**	.826**	1.000

**. Correlation is significant at the 0.01 level (2-tailed)

Regarding the error rates of word choice in pre-tests, the levels of correlation coefficient were .891 - .969, and the levels of correlation coefficient of post-tests were .826 - .929. It was found that the correlation coefficient among the three raters were significant at the .01 level for all instances of rating of word choice.

Table 3.14 Correlations of **Infinitive/Gerund** Found in Pre- and Post-Tests

	Pre-test			Post-test		
	Rater 1	Rater 2	Rater 3	Rater 1	Rater 2	Rater 3
Rater 1	1.000	.904**	.872**	1.000	.881**	.923**
Rater 2	.904**	1.000	.758**	.881**	1.000	.850**
Rater 3	.872**	.758**	1.000	.923**	.850**	1.000

**. Correlation is significant at the 0.01 level (2-tailed)

In accordance with the error rates of infinitive/gerund in pre-tests, the levels of correlation coefficient were .758 - .904, and the levels of correlation coefficient of post-tests were .850 - .923. It was found that the correlation coefficient among the three raters were significant at the .01 level for all instances of rating of infinitive/gerund.

Table 3.15 Correlations of **Verb Form** Found in Pre- and Post-Tests

	Pre-test			Post-test		
	Rater 1	**Rater 2**	**Rater 3**	**Rater 1**	**Rater 2**	**Rater 3**
Rater 1	1.000	.952**	.917**	1.000	.957**	.979**
Rater 2	.952**	1.000	.895**	.957**	1.000	.951**
Rater 3	.917**	.895**	1.000	.979**	.951**	1.000

**. Correlation is significant at the 0.01 level (2-tailed)

According to the error rates of verb form in pre-tests, the levels of correlation coefficient were .895 - .952, and the levels of correlation coefficient of post-tests were .951 - .979. It was found that the correlation coefficient among the three raters were significant at the .01 level for all instances of rating of verb forms.

Table 3.16 Correlations of **Verb Tense** Found in Pre- and Post-Tests

	Pre-test			Post-test		
	Rater 1	**Rater 2**	**Rater 3**	**Rater 1**	**Rater 2**	**Rater 3**
Rater 1	1.000	.986**	.981**	1.000	.958**	.841**
Rater 2	.986**	1.000	.967**	.958**	1.000	.788**
Rater 3	.981**	.967**	1.000	.841**	.788**	1.000

**. Correlation is significant at the 0.01 level (2-tailed)

Regarding the error rates of verb tense in pre-tests, the levels of correlation coefficient were .967 - .986, and the levels of correlation coefficient of post-tests were .788 - .958. It was found that the correlation coefficient among the three raters were significant at the .01 level for all instances of rating of verb tense.

Table 3.17 Correlations of **Transition** Found in Pre- and Post-Tests

	Pre-test			Post-test		
	Rater 1	**Rater 2**	**Rater 3**	**Rater 1**	**Rater 2**	**Rater 3**
Rater 1	1.000	.946**	.964**	1.000	.932**	.858**
Rater 2	.946**	1.000	.907**	.932**	1.000	.815**
Rater 3	.964**	.907**	1.000	.858**	.815**	1.000

**. Correlation is significant at the 0.01 level (2-tailed)

With regards to the error rates of transition in pre-tests, the levels of correlation coefficient were .907 - .964, and the levels of correlation coefficient of post-tests were .815 - .932. It was found that the correlation coefficient among the three raters were significant at the .01 level for all instances of rating of transition.

Table 3.18 Correlations of **Preposition** Found in Pre- and Post-Tests

	Pre-test			Post-test		
	Rater 1	**Rater 2**	**Rater 3**	**Rater 1**	**Rater 2**	**Rater 3**
Rater 1	1.000	.899**	.954**	1.000	.962**	.976**
Rater 2	.899**	1.000	.850**	.962**	1.000	.966**
Rater 3	.954**	.850**	1.000	.976**	.966**	1.000

**. Correlation is significant at the 0.01 level (2-tailed)

According to the error rates of preposition in pre-tests, the levels of correlation coefficient were .850 - .954, and the levels of correlation coefficient of post-tests were .962 - .976. It was found that the correlation coefficient among the three raters were significant at the .01 level for all instances of rating of preposition.

Table 3.19 Correlations of **Modal/Auxiliary** Found in Pre- and Post-Tests

	Pre-test			Post-test		
	Rater 1	**Rater 2**	**Rater 3**	**Rater 1**	**Rater 2**	**Rater 3**
Rater 1	1.000	.857**	.967**	1.000	.945**	.945**
Rater 2	.857**	1.000	.826**	.945**	1.000	.966**
Rater 3	.967**	.826**	1.000	.945**	.966**	1.000

**. Correlation is significant at the 0.01 level (2-tailed)

Regarding the error rates of modal/auxiliary in pre-tests, the levels of correlation coefficient were .826 - .967, and the levels of correlation coefficient of

post-tests were .945 - .966. It was found that the correlation coefficient among the three raters were significant at the .01 level for all instances of rating of modal/auxiliary.

Table 3.20 Correlations of **Run-on Sentence** Found in Pre- and Post-Tests

	Pre-test			Post-test		
	Rater 1	**Rater 2**	**Rater 3**	**Rater 1**	**Rater 2**	**Rater 3**
Rater 1	1.000	.947**	.969**	1.000	.857**	.874**
Rater 2	.947**	1.000	.915**	.857**	1.000	.840**
Rater 3	.969**	.915**	1.000	.874**	.840**	1.000

**. Correlation is significant at the 0.01 level (2-tailed)

In accordance with the error rates of run-on sentence in pre-tests, the levels of correlation coefficient were .915 - .969, and the levels of correlation coefficient of post-tests were .840 - .874. It was found that the correlation coefficient among the three raters were significant at the .01 level for all instances of rating of run-on sentence.

Table 3.21 Correlations of **Fragment** Found in Pre- and Post-Tests

	Pre-test			Post-test		
	Rater 1	**Rater 2**	**Rater 3**	**Rater 1**	**Rater 2**	**Rater 3**
Rater 1	1.000	.889**	.922**	1.000	.959**	.948**
Rater 2	.889**	1.000	.839**	.959**	1.000	.903**
Rater 3	.922**	.839**	1.000	.948**	.903**	1.000

**. Correlation is significant at the 0.01 level (2-tailed)

With regards to the error rates of fragment in pre-tests, the levels of correlation coefficient were .839 - .922, and the levels of correlation coefficient of post-tests were .903 - .959. It was found that the correlation coefficient among the three raters were significant at the .01 level for all instances of rating of fragment.

Table 3.22 Correlations of **Comparison Structure** Found in Pre- and Post-Tests

	Pre-test			Post-test		
	Rater 1	Rater 2	Rater 3	Rater 1	Rater 2	Rater 3
Rater 1	1.000	.864**	.859**	1.000	.866**	.824**
Rater 2	.864**	1.000	.819**	.866**	1.000	.794**
Rater 3	.859**	.819**	1.000	.824**	.794**	1.000

**. Correlation is significant at the 0.01 level (2-tailed)

In terms of the error rates of comparison structure in pre-tests, the levels of correlation coefficient were .819 - .864, and the levels of correlation coefficient of post-tests were .794 - .866. It was found that the correlation coefficient among the three raters were significant at the .01 level for all instances of rating of comparison structure.

Table 3.23 Correlations of **Article** Found in Pre- and Post-Tests

	Pre-test			Post-test		
	Rater 1	Rater 2	Rater 3	Rater 1	Rater 2	Rater 3
Rater 1	1.000	.946**	.922**	1.000	.917**	.895**
Rater 2	.946**	1.000	.901**	.917**	1.000	.891**
Rater 3	.922**	.901**	1.000	.895**	.891**	1.000

**. Correlation is significant at the 0.01 level (2-tailed)

Regarding the error rates of article in pre-tests, the levels of correlation coefficient were .901 - .946, and the levels of correlation coefficient of post-tests were .891 - .917. It was found that the correlation coefficient among the three raters were significant at the .01 level for all instances of rating of article.

Table 3.24 Correlations of **Pronoun** Found in Pre- and Post-Tests

	Pre-test			Post-test		
	Rater 1	Rater 2	Rater 3	Rater 1	Rater 2	Rater 3
Rater 1	1.000	.894**	.936**	1.000	.951**	.925**
Rater 2	.894**	1.000	.818**	.951**	1.000	.878**
Rater 3	.936**	.818**	1.000	.925**	.878**	1.000

**. Correlation is significant at the 0.01 level (2-tailed)

With regards to the error rates of pronoun in pre-tests, the levels of correlation coefficient were .818 - .936, and the levels of correlation coefficient of post-tests were .878 - .951. It was found that the correlation coefficient among the three raters were significant at the .01 level for all instances of rating of pronoun.

In conclusion, the correlation coefficient of all the 16 error categories found in both pre- and post-tests among the three raters was at the .01 level of significance. It is safe to conclude that inter-rater reliability passes the minimum necessary standard for statistical significance.

3.13 Summary of the Chapter

As this study focused on the development of the SMCD Model to reduce grammatical errors in students' L2 writing, it was thus necessary to cover three main issues: the identification of grammatical error types, the implementation of the SMCD Model, and the investigation of students' perspectives on the model. The two studies, which were a preliminary and a pilot study, were initially demonstrated to ensure that the main study was feasibly designed and could be conducted with no difficulty. Besides, research methodology decisions regarding research instruments, research design, data collection procedure, data analysis, and inter-rater reliability were also included in this chapter. Last but not least, the research findings and answers to all the four research questions are presented in the next chapter.

CHAPTER 4

RESEARCH FINDINGS

4.1 Introduction

This study aimed at answering four research questions: 1) What are the components in developing a model of Social Media Collaborative Discussion (SMCD) for the reduction of grammatical errors in EFL university students' writing?; 2) What are the grammatical error categories identified from the three types of genres, namely narration, description, and comparison/contrast?; 3) What are the effects of the SMCD Model on the reduction of grammatical errors in EFL students' writing?; and 4) What are the students' perspectives towards the SMCD Model? As mentioned in Chapter 3, quantitative data were presented in order to answer Research Questions 1, 2, 3, and 4, while qualitative data from diary, content analysis, and semi-structured interview, were analyzed to further address Research Questions 3 and 4.

4.2 Answers to Research Question 1

What are the components in developing a model of Social Media Collaborative Discussion (SMCD) for the reduction of grammatical errors in EFL university students' writing?

Since this study was based on social media technology, which has recently become extremely popular among students and teachers in educational institutions, to make teaching and learning through this kind of means as effective as possible, an appropriate model should therefore be systematically created. In this study, the SMCD Model for the reduction of grammatical errors in L2 writing was constructed based on the Brahmawong's Seven - Step Model for R&D Prototype Development as already reviewed in Chapter 2.
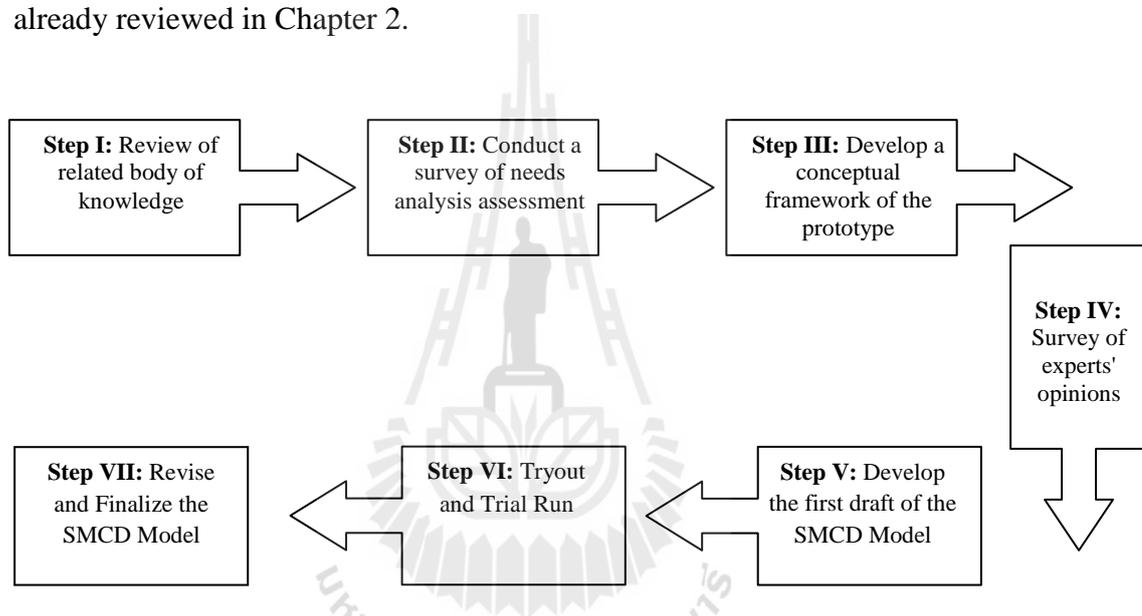
Figure 4.1 Seven Steps of the SMCD Model Development

To concisely explain the developmental stages of the SMCD Model, to come up with an effective model, an intensive review of related knowledge regarding instructional designs and models of online collaborative discussion proposed by well-known educators was presented along with the conceptual framework in Chapter 2, which was basically created from review of the related literature and needs analysis assessment. Then, the three experts (see Appendix K) were asked to respond to the questionnaires for their opinions on the conceptual framework related to satisfaction

on the components that would be used to create a draft model. After a draft model was developed, it was then piloted with a group of students to see whether or not it was appropriate to be implemented with an actual group of participants (see Chapter 3 for the pilot study results). The implementation of the model was done with 35 participants, and at the end of the experiment, the students' perspectives on the use of the SMCD Model were examined prior to finalizing the complete SMCD Model.

4.2.1 The Results of Needs Analysis Assessment

Needs analysis assessment is an important step of model development as it guides what components and activities should be included in the model, since the basic aim is to facilitate and serve learners' needs and learning process. In order to develop an appropriate model of social media collaborative discussion (SMCD), a survey regarding students' needs was initially conducted with 40 second-year English major students. The data are presented in Table 4.1.

Table 4.1 Results of Needs Analysis Assessment

Section 1: Students' general information regarding the use of the Internet		
Questions	**Frequency**	**Percentage**
1. Where do you always use the Internet?		
1.1 university	6	15
1.2 Internet café	6	15
1.3 home/dormitory	28	70
2. How many days a week do you use the Internet?		
2.1 more than 5 days	22	55
2.2 3-4 days	14	35
2.3 less than two days	4	10
3. How many hours a day do you use the Internet?		
3.1 more than 6 hours	12	30
3.2 3-4 hours	21	52.5
3.3 less than 2 hours	7	17.5

Questions	Frequency	Percentage
4. When do you normally use the Internet?		
4.1 in the morning	-	-
4.2 in the afternoon	-	-
4.3 after class	8	20
4.4 in the evening	12	30
4.5 anytime when available	20	50
5. What are your purposes of using the Internet?		
5.1 online games	3	7.5
5.2 knowledge retrieval	2	5
5.3 online communication	30	75
5.4 entertainment e.g. music, movies, etc.	3	7.5
5.5 downloading information	2	5
6. Have you ever used the Internet for assignment discussion with peers?		
6.1 yes	24	60
6.2 no	16	40
7. In your opinion, which social network is the most popular in Thailand?		
7.1 Facebook	39	97.5
7.2 MySpace	-	-
7.3 Twitter	1	2.5
7.4 Hi5	-	-
7.5 Others	-	-

Section 2: Students' needs regarding social networks, online activities, and tasks

Questions	Frequency	Percentage
1. Which social network would you want to use during the process of online collaborative discussion?		
1.1 Facebook	39	97.5
1.2 MySpace	-	-
1.3 Twitter	1	2.5
1.4 Hi5	-	-
1.5 Others	-	-
2. How many members should be included in each online group?		
2.1 9-10 members	-	-
2.2 7-8 members	28	70
2.3 5-6 members	12	30

Questions	Frequency	Percentage
3. How many grammatical categories do you want to include in each online task?		
3.1 1 category	34	85
3.2 2 categories	6	15
3.3 3 categories	-	-
4. Do you want the teacher to provide you with supplementary handouts regarding grammars and structures in order to help you discuss online tasks with your group members?		
4.1 yes	40	100
4.2 no	-	-
5. How many days do you want to work online with your group members?		
5.1 3 days	-	-
5.2 4 days	7	17.5
5.3 5 days	33	82.5
6. How do you want to submit your online tasks?		
6.1 by group representative	30	75
6.2 individually	10	25
7. After online task submission, how would you like to present your knowledge gained from the online collaborative discussion process?		
7.1 write a diary and post it on Facebook	28	70
7.2 take a test after each online task	12	30
8. After the online collaborative discussion activities, do you want to revise your paragraphs, using the knowledge gained from the group discussion?		
1.1 yes	40	100
1.2 no	-	-

According to the data as presented in Table 4.1, the results revealed that 70 % of the students used the Internet at home, while the rests preferred the Internet at the university and the Internet café. More than 50 % of the students went online at least five days a week at approximately 3 to 4 hours per time. Interestingly, 75% of them

surfed the Internet in order to communicate with friends. In terms of social networks, 60 % of the students discussed assignments and homework through these media, and nearly all of them viewed Facebook as the most popular social networking site.

As can be clearly seen, these university students are familiar with the Internet and feel comfortable when using it. In addition, social networks are, at times, used as a means to communicate among peers for various purposes, ranging from entertainment, information exchange, chit-chats to education.

With regards to students' needs in relation to social networks and online tasks for the process of online collaborative discussion, obviously, 97.5% of all the students selected Facebook due to the fact that most of them already had their own accounts and were fond of its ease of use and popularity. Also, it was suggested that online tasks posted on Facebook should be prepared for a particular group of 7-8 students with only one grammar point in each. 70 % of them were satisfied to write diaries regarding what they learned after each online task during the SMCD process and posted them on Facebook. Not surprisingly, after the SMCD activities, all of them needed to make use of their knowledge in order to revise their written works and make them better in terms of grammatical accuracy.

To summarize, Facebook was the social network which the students selected to use as a means for online collaborative discussion. During the SMCD, the students would be working in a small group of seven, and after each online task, they would be required to write diaries individually in order to present the knowledge they had obtained from the discussions. Last but not least, in order to examine the students' writing improvement, they would be asked to revise their written paragraphs, which they were assigned to write in the first week.

4.2.2 Experts' Opinions on the Components Used in the SMCD Model

Based on the conceptual framework, created from review of the related literature and the results of the needs analysis assessment, the six major components were employed in the SMCD Model, and the connection of each component is shown in Figure 4.2.
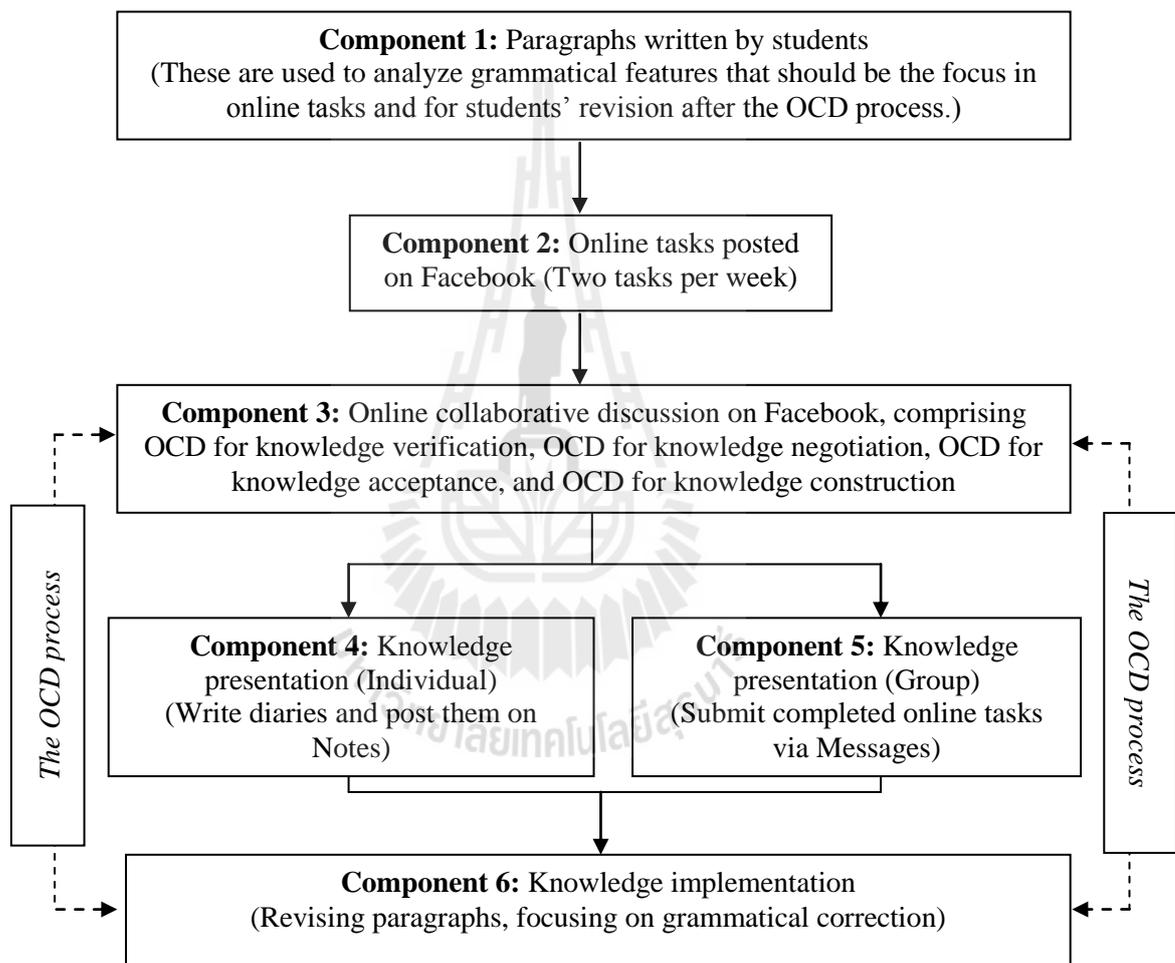
Figure 4.2 The Connection of Each Component Used in the SMCD Model

All the six components and their relationship were then verified by three experts in the fields of language teaching and educational innovation, having been teaching students for at least 15 years at Thepsatri Rajabhat University and

Kasetsart University, Thailand (see Appendix K). The evaluation form was distributed to each expert for their opinions on the suitability and effectiveness of the model components. The researcher was also with the experts in case of their inquiries regarding details of the model components as well as the SMCD Model. The evaluation results were shown in Table 4.2.

Table 4.2 Results of Experts' Opinions on the Model Components

Statements	$\bar{x}$	S.D.
The components of Facebook used in the model, including Groups, Notes, and Messages are appropriate for the process of online collaborative discussion. *(Components 3-5)*	4.33	.577
All the Facebook components to be used in the SMCD Model are appropriately connected. *(Components 3-5)*	4.67	.577
The process of online collaborative discussion, comprising OCD for knowledge verification, OCD for knowledge negotiation, OCD for knowledge acceptance, and OCD for knowledge construction, is appropriate and applicable for students' grammatical knowledge enhancement. *(Component 3)*	4.33	.577
Apart from the OCD process, the activities, consisting of diary writing, online task submission, and paragraph revision, are appropriate to be included in the SMCD Model. *(Components 4 - 5)*	4.33	.577
The connection of each component is easy to follow and appropriate to be implemented. *(Components 1-6)*	4.67	.577
The model components are appropriate to be used in encouraging students to collaboratively discuss and construct knowledge in terms of grammatical structures. *(Components 1-6)*	4.67	.577
The model components are adaptable to be used in other contexts with other language focuses and with different social networks. *(Components 1-6)*	4.67	.577
Overall, the model components are satisfactory and ready to be used in the SMCD Model. *(Components 1-6)*	5	.000
TOTAL	**4.58**	**.235**

N = 3

According to the evaluation results of the model components as presented, overall, they were accepted as appropriate to be used in the SMCD Model and

implemented with students as all the three experts strongly endorsed their appropriateness ($\bar{x}$ = 4.58, S.D. = .235). The components of Facebook used in the model, the online collaborative discussion process, and online activities as well as online tasks were considered as appropriate ($\bar{x}$ = 4.33, S.D. = .577). Furthermore, the connection of Facebook components, the connection of all the components in the model, the model component appropriateness to help enhance students' grammatical accuracy in English writing, and their adaptability were also viewed as highly suitable ($\bar{x}$ = 4.67, S.D. = .577) to be employed in an L2 writing environment.

4.2.3 The Draft SMCD Model

After the assessment of the model components, a draft model was developed and piloted with 20 participants for six weeks prior to its implementation in the main study. The pilot study results were presented in Chapter 3. In addition, the answers to Research Question 3, regarding the effects of the model implementation on the reduction of grammatical errors in L2 writing could be considered as Step 6 of the model development, and the answers to Research Question 4, pertaining to students' perspectives towards the SMCD model, were related to Step 7 on account that the results were used to revise and finalize the SMCD Model. Last but not least, the complete SMCD Model was proposed, with particular details in terms of components used, online task designs, the model flowchart, and steps of the model, in Chapter 5.
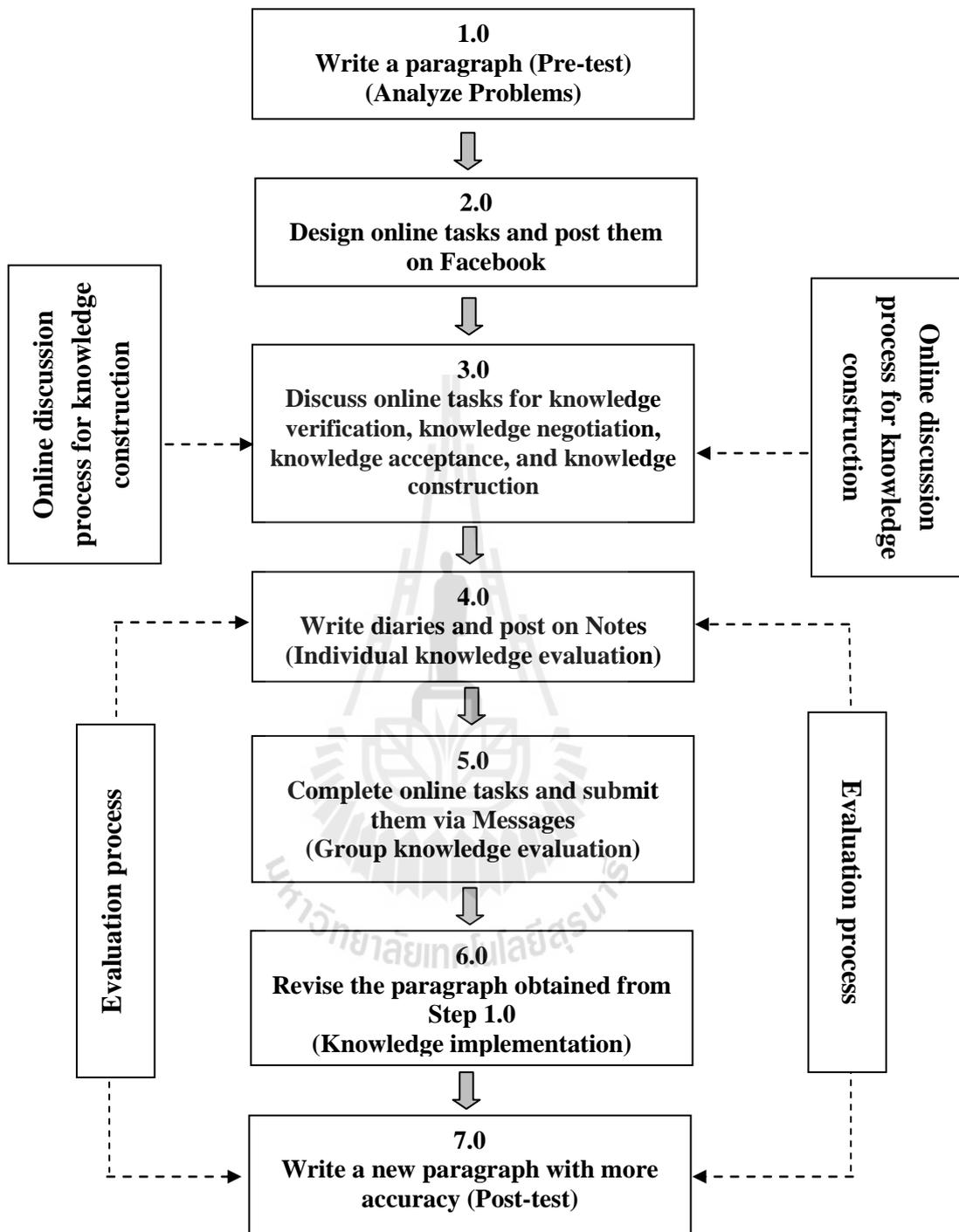
Figure 4.3 Diagram of the Draft SMCD Model

To clarify in brief, there are seven main steps in the draft SMCD Model as presented in Figure 4.3. In the main study, the draft model, from Step 1.0 to Step 7.0, was tried out with the 35 participants.

Step 1.0: Write a Paragraph (Analyze Problems)

To analyze the problems in terms of grammatical error categories, the students were assigned to write paragraphs (as their pre-tests) in three different writing genres, namely narration, description, and comparison/contrast. Grammatical errors found in the students' writing were then categorized.

Step 2.0: Design Online Tasks

The online tasks were created based on 16 grammatical error categories found from the students' paragraphs. In the production of tasks, three experts in language teaching were consulted on the contents with regards to suitability and validity (see Appendix K). Each online task included errors related to only one grammatical rule for the students to discuss with peers in their online groups, correct the errors, and finally gain grammatical knowledge.

Step 3.0: Discuss Online Tasks

This step comprises four types of discussions: Discuss for knowledge verification, Discuss for knowledge negotiation, Discuss for Knowledge acceptance, and Discuss for knowledge construction. The students worked online with their group members to discuss two online tasks provided each week in order to come up with applicable knowledge that could be used to complete online tasks and revise their pre-test paragraphs.

Step 4.0: Write a Diary

After the students completed their discussions each week, to examine what they had learned from the activities, they were assigned to write diaries regarding the knowledge they had gained and post them on Notes.

Step 5.0: Complete Online Tasks

Within the week, apart from diary writing (Individual work), the students helped one another in their groups to complete the online tasks, using their knowledge to correct the errors in the paragraphs and choose a group representative to submit the complete online tasks to the researcher through Facebook Messages.

Step 6.0: Revise the Paragraph (obtained from Step 1.0)

This step is to verify the students' knowledge implementation, which is not done online. That is, a student made use of the knowledge gained from the discussion activities to revise his/her paragraphs that had been written in the first week and submit them to the researcher in class. (see Table 3.7 in Chapter 3 for the data collection procedure).

Step 7.0: Write a New Paragraph (Post-test)

To assess grammatical competence, the students were assigned to write paragraphs on three topics parallel to the pre-tests. These paragraphs were then analyzed and compared with the pre-test paragraphs to investigate their writing effectiveness in terms of grammatical accuracy.

After the implementation, the draft SMCD Model was revised and finalized according to the students' performances and attitudes on the model. The particular details regarding components, examples of students' discussions, online task production, and flowchart of the complete SMCD Model are presented in Chapter 5.

4.3 Answers to Research Question 2

What are the grammatical error categories identified from the three types of genres, namely narration, description, and comparison/contrast?

According to the results of preliminary study in Chapter 3, it can be seen that the grammatical error categories found were also consistent with the error types presented in some research conducted in both Thailand and other foreign countries. Therefore, all the 16 categories in the preliminary study were used for the analysis of 105 paragraphs written by 35 participants as their pre-tests in the main study.

Table 4.3 Error Categories Found in Narrative Writing

Error Categories	Frequency	$\bar{x}$	Percentage	SD
Verb tense (VT)	381	10.89	27.81	5.60
Article (Art)	144	4.11	10.51	3.62
Word choice (WC)	135	3.86	9.85	2.48
Sentence structure (SS)	129	3.69	9.42	2.37
Preposition (Prep)	129	3.69	9.42	2.39
Singular/Plural form (Sing/Plu)	91	2.60	6.64	2.06
Modal/Auxiliary (Mod/Aux)	77	2.20	5.62	2.08
Verb form (VF)	58	1.66	4.23	1.60
Pronoun (Pron)	52	1.49	3.80	1.48
Infinitive/Gerund (Inf/Ger)	43	1.23	3.14	1.23
Fragment (Frag)	39	1.11	2.85	1.43
Run-on sentence (RO)	31	0.89	2.26	0.99
Parallel structure (Parallel)	24	0.69	1.75	0.83
Transition (Trans)	20	0.57	1.46	0.69
Subject-verb agreement (SV)	13	0.37	0.95	0.77
Comparison structure (Comp)	4	0.11	0.29	0.32
Total	**1,370**	**39.14**	**100**	**12.99**

As shown in Table 4.3, the five most frequent errors in narrative writing were verb tense ($\bar{x}$ = 10.89, 27.81%), article ($\bar{x}$ = 4.11, 10.51%), word choice ($\bar{x}$ = 3.86, 9.85%), sentence structure ($\bar{x}$ = 3.69, 9.42%), and preposition ($\bar{x}$ = 3.69, 9.42%), all of which were quite similar to the results of preliminary study. It can be explained that

grammatical errors found from these two groups of participants similarly affected their L2 writing in terms of grammatical accuracy. Additionally, the other error categories were singular/plural form ($\bar{x}$ = 2.60, 6.64%), modal/auxiliary ($\bar{x}$ = 2.20, 5.62%), verb form ($\bar{x}$ = 1.66, 4.23%), pronoun ($\bar{x}$ = 1.49, 3.80%), infinitive/gerund ($\bar{x}$ = 1.23, 3.14%), fragment ($\bar{x}$ = 1.11, 2.85%), run-on sentence ($\bar{x}$ = 0.89, 2.26%), parallel structure ($\bar{x}$ = 0.69, 1.75%), transition ($\bar{x}$ = 0.57, 1.46%), subject-verb agreement ($\bar{x}$ = 0.37, 0.95%), and comparison structure ($\bar{x}$ = 0.11, 0.29%), respectively.

Table 4.4 Error Categories Found in Descriptive Writing

Error Categories	Frequency	$\bar{x}$	Percentage	SD
Article (Art)	237	6.77	19.59	4.86
Word choice (WC)	161	4.60	13.31	2.72
Sentence structure (SS)	158	4.51	13.06	3.02
Singular/Plural form (Sing/Plu)	133	3.80	10.99	3.12
Preposition (Prep)	77	2.20	6.36	1.93
Subject-verb agreement (SV)	67	1.91	5.54	2.33
Modal/Auxiliary (Mod/Aux)	62	1.77	5.12	1.69
Verb form (VF)	56	1.60	4.63	1.95
Run-on sentence (RO)	50	1.43	4.13	2.03
Fragment (Frag)	45	1.29	3.72	1.79
Verb tense (VT)	40	1.14	3.31	1.86
Infinitive/Gerund (Inf/Ger)	36	1.03	2.98	1.24
Transition (Trans)	36	1.03	2.98	1.29
Pronoun (Pron)	25	0.71	2.07	0.92
Parallel structure (Parallel)	23	0.66	1.90	0.83
Comparison structure (Comp)	4	0.11	0.33	0.32
Total	**1,210**	**34.57**	**100**	**13.21**

Apparently, compared with the result of preliminary study, the five most frequent error types in descriptive writing found in the main study were also similar: article ($\bar{x}$ = 6.77, 19.59%), word choice ($\bar{x}$ = 4.60, 13.31%), sentence structure ($\bar{x}$ = 4.51, 13.06%), singular/plural form ($\bar{x}$ = 3.80, 10.99 %), and preposition ($\bar{x}$ = 2.20, 6.36%), while the other error categories were subject-verb agreement

($\bar{x}$ = 1.91, 5.54%), modal/auxiliary ($\bar{x}$ = 1.77, 5.12%), verb form ($\bar{x}$ = 1.60, 4.63%),

run-on sentence ($\bar{x}$ = 1.43, 4.13%), fragment ($\bar{x}$ = 1.29, 3.72%), verb tense

($\bar{x}$ = 1.14, 3.31%), infinitive/gerund ($\bar{x}$ = 1.03, 2.98%), transition ($\bar{x}$ = 1.03, 2.98%),

pronoun ($\bar{x}$ = 0.71, 2.07%), parallel structure ($\bar{x}$ = 0.66, 1.90%), and comparison

structure ($\bar{x}$ = 0.11, 0.33%).

Table 4.5 Error Categories Found in Comparison/Contrast Writing

Error Categories	Frequency	$\bar{x}$	Percentage	SD
Word choice (WC)	158	4.51	14.55	3.43
Sentence structure (SS)	136	3.89	12.52	2.58
Singular/Plural form (Sing/Plu)	125	3.57	11.51	2.17
Article (Art)	95	2.71	8.75	2.30
Subject-verb agreement (SV)	80	2.29	7.37	2.79
Modal/Auxiliary (Mod/Aux)	74	2.11	6.81	1.85
Preposition (Prep)	72	2.06	6.63	2.01
Verb form (VF)	66	1.89	6.08	1.40
Comparison structure (Comp)	52	1.49	4.79	1.19
Pronoun (Pron)	42	1.20	3.87	1.67
Run-on sentence (RO)	38	1.09	3.50	1.44
Verb tense (VT)	38	1.09	3.50	1.56
Transition (Trans)	33	0.94	3.04	0.90
Infinitive/Gerund (Inf/Ger)	31	0.89	2.85	0.93
Fragment (Frag)	26	0.74	2.39	0.98
Parallel structure (Parallel)	20	0.57	1.84	0.60
Total	**1,086**	**31.03**	**100**	**9.30**

In accordance with Table 4.5, the five most frequent errors in this genre,

which were also similar to those found in the preliminary study, were word choice

($\bar{x}$ = 4.51, 14.55%), sentence structure ($\bar{x}$ = 3.89, 12.52%), singular/plural form

($\bar{x}$ = 3.57, 11.51%), article ($\bar{x}$ = 2.71, 8.75%), and subject-verb agreement ($\bar{x}$ = 2.29,

7.37%), respectively. The others were modal/auxiliary ($\bar{x}$ = 2.11, 6.81%), preposition

($\bar{x}$ = 2.06, 6.63%), verb form ($\bar{x}$ = 1.89, 6.08%), comparison structure ($\bar{x}$ = 1.49,

4.79%), pronoun ($\bar{x}$ = 1.20, 3.87%), run-on sentence ($\bar{x}$ = 1.09, 3.50%), verb tense

($\bar{x}$ = 1.09, 3.50%), transition ($\bar{x}$ = 0.94, 3.04%), infinitive/gerund ($\bar{x}$ = 0.89, 2.85%),

fragment ($\bar{x}$ = 0.74, 2.39%), and parallel structure ($\bar{x}$ = 0.57, 1.84%). As expected,

comparison structure became the ninth frequent error category in this writing genre,

as also happening in the preliminary study, since the students were required to express

their opinions on *Watching News on Television vs. Reading News from a Paper*;

consequently, the comparison structure was required.

Table 4.6 Error Categories across the Three Writing Genres

Error Categories	Frequency	$\bar{x}$	Percentage	SD
Article (Art)	476	4.53	12.98	4.08
Verb tense (VT)	459	4.37	12.52	5.79
Word choice (WC)	454	4.32	12.38	2.90
Sentence structure (SS)	423	4.03	11.54	2.67
Singular/Plural form (Sing/Plu)	349	3.32	9.52	2.52
Preposition (Prep)	278	2.65	7.58	2.23
Modal/Auxiliary (Mod/Aux)	213	2.03	5.81	1.87
Verb form (VF)	180	1.71	4.91	1.66
Subject-verb agreement (SV)	160	1.52	4.36	2.28
Run-on sentence (RO)	119	1.13	3.25	1.55
Pronoun (Pron)	119	1.13	3.25	1.42
Fragment (Frag)	110	1.05	3.00	1.44
Infinitive/Gerund (Inf/Ger)	110	1.05	3.00	1.14
Transition (Trans)	89	0.85	2.43	1.00
Parallel structure (Parallel)	67	0.64	1.83	0.76
Comparison structure (Comp)	60	0.57	1.64	0.97
Total	**3,666**	**34.91**	**100**	**12.31**

Table 4.6 presents all the 16 error types, with their frequency, mean scores,

percentage, and SD, found in narrative, descriptive, and comparison/contrast writing.

As clearly seen, the five most frequent errors were article ($\bar{x}$ = 4.53, 12.98%), verb

tense ($\bar{x}$ = 4.37, 12.52%), word choice ($\bar{x}$ = 4.32, 12.38%), sentence structure

($\bar{x}$ = 4.03, 11.54%), and singular/plural form ($\bar{x}$ = 3.32, 9.52%), respectively. To

enhance students' writing accuracy of these three genres, an intensive emphasis

should be put on these five error categories. However, the other error types, which

were also considered as essential for instruction, were preposition ($\bar{x}$ = 2.65, 7.58%),

modal/auxiliary ($\bar{x}$ = 2.03, 5.81%), verb form ($\bar{x}$ = 1.71, 4.91%), subject-verb agreement ($\bar{x}$ = 1.52, 4.36%), run-on sentence ($\bar{x}$ =1.13, 3.25%), pronoun ($\bar{x}$ = 1.13, 3.25%), fragment ($\bar{x}$ = 1.05, 3.00%), infinitive/gerund ($\bar{x}$ = 1.05, 3.00%), transition ($\bar{x}$ = 0.85, 2.43%), parallel structure ($\bar{x}$ = 0.64, 1.83%), and comparison structure ($\bar{x}$ = 0.57, 1.64%).

4.4 Answers to Research Question 3

What are the effects of the SMCD Model on the reduction of grammatical errors in EFL students' writing?

This research primarily emphasized the reduction of grammatical errors in university students' English writing. The method for doing so was by employing the SMCD Model to enhance their grammatical knowledge through online discussion activities for 16 weeks, equivalent to one semester (see Appendix G for the examples of participants' discussions and comments). To answer Research Question 3 clearly, three research instruments/methods were used: Pre-and post-tests, diary, and content analysis of Revisions 1 & 2.

4.4.1 Effects of the SMCD Model on the Reduction of Grammatical

Errors in L2 Writing

In Week 1, the participants were assigned to write three paragraphs of different genres: *My Memorable Trip* (narrative), *My Ideal House* (descriptive), and *Watching News on Television vs. Reading News from a Paper* (comparison/contrast). All of the 105 paragraphs generated from this prompt were used as a pre-test and analyzed for error frequency by two of the three aforementioned experts and the researcher. After the 16-week experiment, the participants were then asked to write

three more paragraphs on different topics in the same genres as a post-test: *My Most Embarrassing Experience* (narrative), *My Favorite Restaurant* (descriptive), and *Learning English with a Thai Teacher vs. Learning English with a Native Speaker* (comparison/contrast). Again, this second batch of 105 paragraphs were analyzed for their error frequency by the same three experts, and then the mean scores of both pre- and post-tests were compared, using Paired-Sample T-Test, to see whether or not error frequency was significantly reduced after the treatment. This section presents the effects of the SMCD Model on grammatical error reduction in narrative, descriptive, and comparison/contrast writing, respectively, followed by the total grammatical error reduction in the three genres.

4.4.1.1 Effects of the SMCD Model on Grammatical Error Reduction in Narrative Writing

To compare the students' writing accuracy between pre- and post tests, 70 narrative paragraphs were analyzed, and the results were presented quantitatively. Table 4.7 reports the significant differences of each error category.

Table 4.7 The Results of Paired Sample T-Test Comparing Error Frequency between Pre- and Post-Tests of Narrative Writing

Error Categories	Pre-test		Post-test		Sig (2-tailed)
	$\bar{x}$	SD	$\bar{x}$	SD	
Verb tense (VT)	10.89	5.60	4.26	3.07	.000**
Article (Art)	4.11	3.62	2.26	1.83	.009**
Word choice (WC)	3.86	2.48	4.60	2.56	.262
Sentence structure (SS)	3.69	2.37	2.57	2.06	.059
Preposition (Prep)	3.69	2.39	1.37	1.37	.000**
Singular/Plural form (Sing/Plu)	2.60	2.06	0.94	1.53	.000**
Modal/Auxiliary (Mod/Aux)	2.20	2.08	0.20	0.86	.000**
Verb form (VF)	1.66	1.60	1.60	2.13	.872
Pronoun (Pron)	1.49	1.48	0.69	0.90	.004**

Error Categories	Pre-test		Post-test		Sig
	$\bar{x}$	SD	$\bar{x}$	SD	(2-tailed)
Infinitive/Gerund (Inf/Ger)	1.23	1.23	0.37	0.73	.001**
Fragment (Frag)	1.11	1.43	0.54	0.78	.033*
Run-on sentence (RO)	0.89	0.99	1.34	1.25	.129
Parallel structure (Parallel)	0.69	0.83	0.00	0.00	.000**
Transition (Trans)	0.57	0.69	0.31	0.58	.071
Subject-verb agreement (SV)	0.37	0.77	0.00	0.00	.007**
Comparison structure (Comp)	0.11	0.32	0.00	0.00	.044*
Sum	**39.14**	**12.99**	**21.06**	**8.73**	**.000****

** Significant at the .01 level

* Significant at the .05 level

According to Table 4.7, the levels of significance of the mean values of verb tense, preposition, singular/plural form, modal/auxiliary, and parallel structure were at the .000 level, while other six error types were significant at varied levels: infinitive/gerund (at .001 level), pronoun (at .004 level), subject-verb agreement (at .007 level), article (at .009 level), fragment (at .033 level), and comparison structure (at .044 level). However, after the experiment, there were five error categories, which were not statistically significant: sentence structure (at .059 level), transition (at .071 level), run-on sentence (at .129 level), word choice (at .262 level), and verb form (at .872 level). Overall, the significant reduction of all the error types found in both pre- and post-tests was at the .000 level. That is to say, the errors attributed to negative language transfer in the post-tests were significantly decreased after the experiment.

4.4.1.2 Effects of the SMCD Model on Grammatical Error

Reduction in Descriptive Writing

70 descriptive paragraphs were analyzed, and their mean values were compared to see whether there were significant differences regarding the frequency of each error type as presented in Table 4.8 below.

Table 4.8 The Results of Paired Sample T-Test Comparing Error Frequency between

Pre- and Post-Tests of Descriptive Writing

Error Categories	Pre-test		Post-test		Sig
	$\bar{x}$	SD	$\bar{x}$	SD	(2-tailed)
Article (Art)	6.77	4.86	1.97	1.50	.000**
Word choice (WC)	4.60	2.72	3.06	2.16	.006**
Sentence structure (SS)	4.51	3.02	3.29	2.27	.043*
Singular/Plural form (Sing/Plu)	3.80	3.12	1.37	1.35	.000**
Preposition (Prep)	2.20	1.93	0.83	1.31	.003**
Subject-verb agreement (SV)	1.91	2.33	0.46	0.74	.001**
Modal/Auxiliary (Mod/Aux)	1.77	1.69	0.29	0.75	.000**
Verb form (VF)	1.60	1.95	0.51	0.61	.005**
Run-on sentence (RO)	1.43	2.03	1.37	1.11	.873
Fragment (Frag)	1.29	1.79	0.83	1.20	.251
Verb tense (VT)	1.14	1.86	1.09	1.46	.889
Infinitive/Gerund (Inf/Ger)	1.03	1.24	0.20	0.53	.001**
Transition (Trans)	1.03	1.29	0.29	0.75	.008**
Pronoun (Pron)	0.71	0.92	0.40	0.60	.133
Parallel structure (Parallel)	0.66	0.83	0.06	0.23	.000**
Comparison structure (Comp)	0.11	0.32	0.03	0.16	.183
sum	**34.57**	**13.21**	**16.66**	**6.54**	**.000**

** Significant at the .01 level

* Significant at the .05 level

With regards to the analysis, four error types, consisting of article, singular/plural form, modal/auxiliary, and parallel structure, were significantly different at the .000 level. It can be said that after the OCD process, the error frequency of these four error types in students' descriptive writing were obviously reduced. In addition, seven other error categories, comprising infinitive/gerund (at .001 level), subject-verb agreement (at .001 level), preposition (at .003 level), verb form (at .005 level), word choice (at .006 level), transition (at .008 level), and sentence structure (at .043 level), were also significant. Five error types showed no significant difference in error frequency: pronoun (at .133 level), comparison structure (at .183 level), fragment (at .251 level), run-on sentence (at .873 level), and verb tense

(at .889 level). When considered overall, the result of pre-and post-tests was at the .000 level of significance; that is, the reduction of grammatical error frequency in descriptive writing was clearly seen.

4.4.1.3 Effects of the SMCD Model on Grammatical Error

Reduction in Comparison/Contrast Writing

70 comparison/contrast paragraphs written as pre- and post-tests were analyzed and their mean values compared. The analysis results of each error category are displayed in Table 4.9.

Table 4.9 The Results of Paired Sample T-Test Comparing Error Frequency between

Pre- and Post-Tests of Comparison/Contrast Writing

Error Categories	Pre-test		Post-test		Sig
	$\bar{x}$	SD	$\bar{x}$	SD	(2-tailed)
Word choice (WC)	4.51	3.43	2.71	2.24	.025*
Sentence structure (SS)	3.89	2.58	3.26	1.48	.186
Singular/Plural form (Sing/Plu)	3.57	2.17	2.43	2.97	.101
Article (Art)	2.71	2.30	1.54	1.65	.024*
Subject-verb agreement (SV)	2.29	2.79	0.63	0.69	.002**
Modal/Auxiliary (Mod/Aux)	2.11	1.85	0.46	0.70	.000**
Preposition (Prep)	2.06	2.01	0.40	0.73	.000**
Verb form (VF)	1.89	1.40	0.71	0.95	.000**
Comparison structure (Comp)	1.49	1.19	0.34	0.59	.000**
Pronoun (Pron)	1.20	1.67	0.71	1.29	.181
Run-on sentence (RO)	1.09	1.44	0.97	0.98	.689
Verb tense (VT)	1.09	1.56	0.66	1.13	.053
Transition (Trans)	0.94	0.90	0.23	0.59	.001**
Infinitive/Gerund (Inf/Ger)	0.89	0.93	0.54	1.01	.148
Fragment (Frag)	0.74	0.98	0.80	0.79	.807
Parallel structure (Parallel)	0.57	0.60	0.11	0.32	.001**
sum	**31.03**	**9.30**	**16.51**	**6.35**	**.000****

** Significant at the .01 level
* Significant at the .05 level

In accordance with Table 4.9, there was a significant difference of error frequency in modal/auxiliary, preposition, verb form, and comparison structure at the

.000 level. Five other error types, including transition (at .001 level), parallel structure (at .001 level), subject-verb agreement (at .002 level), article (at .024 level), and word choice (at .025 level), were also significantly different in terms of error frequency or L1 interference reduction. However, there was no significant reduction of L1 interference of the following error types: verb tense (at .053 level), singular/plural form (at .101 level), pronoun (at .181 level), sentence structure (at .186 level), infinitive/gerund (at .148 level), run-on sentence (at .689 level), and fragment (at .807 level). Compared to the analysis results of the other two writing genres, there were 7 error categories, which were not significantly different in comparison/contrast writing. Overall, the result of compared mean values between pre- and post-tests was still statistically significant.

4.4.1.4 Effects of the SMCD Model on Total Grammatical Error Reduction in the Three Writing Genres

To compare the students' writing accuracy between pre- and post tests, 210 paragraphs of narration, description, and comparison/contrast were analyzed, using Paired Sample T-Test. Table 4.10 presents the differences of each error category and the level of statistical significance.

Table 4.10 The Results of Paired Sample T-Test Comparing Error frequency between

Pre- and Post-Tests of the Three Writing Genres

Error Categories	Pre-test		Post-test		Sig
	$\bar{x}$	SD	$\bar{x}$	SD	(2-tailed)
Article (Art)	4.53	4.08	1.92	1.68	.000**
Verb tense (VT)	4.37	5.79	2.00	2.60	.000**
Word choice (WC)	4.32	2.90	3.46	2.45	.029*
Sentence structure (SS)	4.03	2.67	3.04	1.97	.002**
Singular/Plural form (Sing/Plu)	3.32	2.52	1.58	2.15	.000**
Preposition (Prep)	2.65	2.23	0.87	1.23	.000**
Modal/Auxiliary (Mod/Aux)	2.03	1.87	0.31	0.77	.000**
Verb form (VF)	1.71	1.66	0.94	1.46	.000**
Subject-verb agreement (SV)	1.52	2.28	0.36	0.63	.000**
Run-on sentence (RO)	1.13	1.55	1.23	1.12	.599
Pronoun (Pron)	1.13	1.42	0.60	0.97	.001**
Fragment (Frag)	1.05	1.44	0.72	0.94	.067
Infinitive/Gerund (Inf/Ger)	1.05	1.14	0.37	0.78	.000**
Transition (Trans)	0.85	1.00	0.28	0.64	.000**
Parallel structure (Parallel)	0.64	0.76	0.06	0.23	.000**
Comparison structure (Comp)	0.57	0.97	0.12	0.38	.000**
sum	**34.91**	**12.31**	**18.08**	**7.52**	**.000****

** Significant at the .01 level

* Significant at the .05 level

As illustrated in Table 4.10, in all the three writing genres, a significant difference regarding the reduction of grammatical errors of 11 error types, comprising article, verb tense, singular/plural form, preposition, modal/auxiliary, verb form, subject-verb agreement, infinitive/gerund, transition, parallel structure, and comparison structure, was at the .000 level. As well as these error categories, pronoun, sentence structure, and word choice were also significantly different at the levels of .001, .002, and .029, respectively. However, there was no significant reduction in fragment (at .067 level), and run-on sentence (at .599 level). Overall, there was evidence of improvements in the grammatical accuracy of students' writing through their post-tests, and supported by the statistical results. By extension, after the

implementation of the SMCD Model, the errors that were caused by negative language transfer and found in the three writing genres were significantly reduced.

4.4.2 Qualitative Analysis of Students' Knowledge Construction through Diary Writing

Practically, particular linguistic knowledge is necessary for student writers to make their paragraphs grammatically accurate. Also, according to the constructivist theory as discussed in Chapter 2, knowledge is constructed more effectively in groups rather than individually. As this research focused on learners' constructed knowledge gained from online discussions, it was decided to include diary writing to investigate their experiences during the OCD activities. In the main study, the participants were assigned to write diaries individually in relation to what they had already learned from the group discussions on Facebook and then to post them on Notes week by week. To make this process as effective as possible, the students were allowed to keep writing their own diaries in the Thai language. Then, all the data collected from Notes were analyzed and presented qualitatively.

With regards to the data analysis, from group discussions on weekly online tasks, not only did the participants brush up their previous grammatical knowledge, having been taught in Grammar Courses 1 and 2, but they also learned new linguistic skills advantageous to their L2 writing. The qualitative analysis in this main study was thus presented from two principal issues: Online Collaborative Discussion for Reviewing Previous Knowledge and Online Collaborative Discussion for Constructing New Knowledge.

4.4.2.1 Online Collaborative Discussion for Reviewing Previous Knowledge

According to the 16 error categories presented earlier, some of them had already been taught to the participants in previous courses: sentence structure, subject-verb agreement, singular/plural form, infinitive/gerund, verb form, verb tense, preposition, pronoun, article, and comparison structure. Despite having already studied all of them, most of the participants could not make use of them correctly when writing their pre-test paragraphs since there were so many mistakes found. Compounding the problem, after the completion of Grammar Courses 1 and 2, the participants had few opportunities to practice as well as to revise their existing knowledge; consequently, when they were assigned to write three paragraphs in three different genres, all of them felt uncomfortable with syntactic structures to be used in L2 writing. Student 1 mentioned in her first week diary:

> *I admit that I forgot some grammatical rules such as tenses, subject-verb agreement, past participle verbs, and so on. Therefore, I found it difficult when I had to write a paragraph in English, and I finally felt frustrated.*

Student 2 also said in her week one diary:

> *I think it was quite difficult for me to write a paragraph because I was not certain about grammar and structures that I had to use in my writing. Especially, in narrative writing, I found that I made a lot of mistakes about tenses and verb forms. Actually, I had studied them before, but I had never revised them for a semester. When I had to study a writing course, I realized how important grammar was.*

According to the two students' diary records as just illustrated, it can be seen that the participants were prompt to actively participate in online group discussions as they were aware of their weaknesses in terms of grammatical structures and felt that their

previous knowledge, which they had learned, could be useful and necessary in English writing.

After a series of online collaborative discussions on Facebook, many of them seemed more confident with their syntactic knowledge as they could participate more in the discussion activities and express what they had learned in their diaries, especially in relation to their revisions of grammatical knowledge. Here are the illustrations regarding the participants' diary writing, explaining what experiences they had obtained from the OCD process.

> *I learned more about singular & plural nouns, which made me more confident with this grammar point than ever. Apart from the group discussions, I also looked for more information from the Internet and grammar books, which was so helpful when I discussed with my friends on Facebook. (Student 3)*

> *In terms of subject-verb agreement, I found that when a subject was a singular noun, I had to add an S after it. And, when it was a plural noun, S was not needed. This rule was applied to only third person singular subjects; that is, S was not needed after a verb with subjects I and you, which were considered as the first and second persons. Because of the online task and discussions, I had an opportunity to brush up my knowledge about this grammar. (Student 4)*

As can be clearly seen, students three and four felt satisfied with the online tasks they discussed with their group members on account that they could review what they had already been taught in the past and felt more confident and certain with their previous knowledge when discussing it on Facebook. Besides, interestingly, some students also provided examples of language uses in the diary entries to support their understandings such as:

> *What I learned from the online task about verb tense was how to use appropriate verb tenses when writing a narrative paragraph. That is, when telling something already*

happened in the past, past verbs were essential. For example, on the first day, <u>I felt</u> so good about the trip. Apart from verb tense, verb forms, especially irregular ones, were also important for Thai learners to memorize. (Student 5)

Although I had learned about article since I was very young, it was still difficult when I had to use it in my writing. The online task about article taught me how to use a, an, or the with an appropriate noun. For example, my dream house is <u>a</u> big house with <u>a</u> small garden. Since I mentioned house for the first time, I, therefore, had to put <u>a</u> in front of it…… (Student 6)

According to the two examples taken from students five and six as shown above, it can be clearly interpreted that the participants did gain some knowledge from the discussion activities. Not only could they clearly explain some crucial grammatical restrictions in their own understandings, but they also gave the examples of linguistic features used in the sentences correctly.

4.4.2.2 Online Collaborative Discussion for Constructing New Knowledge

It was not surprising that all the participants made many mistakes when writing pre-test paragraphs, since some of the grammatical error categories had not been introduced to them before, including run-on sentence, fragment, word choice, parallel structure, and transition. Therefore, during the discussion tasks on Facebook, the participants had to study online materials that were provided carefully prior to sharing contributions, and under the researcher's supervision. Occasionally, the participants were not certain with what they were discussing; hence, the researcher had to stand by on Facebook in order to provide prompt assistance for those who needed instant suggestions.

Even if the aforementioned error categories were still new to the participants, some understandings could be seen from their explanations in their diary entries. Student 7 explained:

> *This online task offered me new knowledge about fragment. It meant an incomplete sentence or just phrases, which could not be used as a sentence because it lacked either a subject or a verb. For example, <u>Ran into town</u>. This was wrong because there was no subject. The correct one should be "He ran into town.*

According to this example, it can be said that this student somewhat understood the concepts of fragment sentences as she could give a correct example with the right correction. In addition to fragment sentences, the other categories were also explained somewhat clearly in the participants' diaries as shown in the records below.

> *I have just come to know the term run-on sentence since I took this writing course. The online task as well as the provided online supplementary materials helped me understand more about it. In my opinion, run-on sentence tended to be two or more sentences joining without appropriate use of punctuations. For example, my favorite trip was Samed Island it was very beautiful and amazing. (Student 8)*

> *Vocabulary was important to L2 writing, but how to use an appropriate word in a suitable context was more important. The online task about word choice introduced me about how to select correct words for each particular context. For example, My father <u>opened</u> the radio and listened to his favorite songs. "Opened" cannot be used with the radio in this sentence. It should be changed to "turned on" or "switched on". (Student 9)*

> *In Thai writing, we don't put much attention on parallel structure, but in English writing, it is very necessary. This task made me understand more about this structural restriction; that is, two words, connected by coordinating conjunctions or some transitions such as and, but, or, not only……but also, and so on, should be the same word types or classes…. (Student 10)*

As the examples shown above, it is fair to say that the OCD activities on Facebook had encouraged and enhanced students' new knowledge construction. The data obtained from the participants' diaries were able to be used as an evidence of experiences gained during the process of online collaborative discussion, since all of them expressed their comprehension regarding grammatical error categories informatively.

In conclusion, the SMCD Model had a positive effect on the ways the students discussed both review of previous knowledge and construction of new knowledge. Through diary writing, the participants were able to show what they had learned to other members within their own groups, which was a way to share constructed experiences with one another.

4.4.3 Qualitative Analysis of Students' Knowledge Implementation through Revisions 1 and 2

The SMCD Model was implemented with 35 participants for 16 weeks with 16 online tasks. After Online Tasks 8 and 16, the participants were asked to revise their pre-test paragraphs (regarded as the first drafts in this analysis) two times, called Revision 1 and Revision 2, respectively. The students then submitted their revisions in class and got feedback regarding grammatical structures from the researcher. The online tasks were arranged according to the error categories which were seen in the participants' writing from the most to the least frequent, referring to the data analysis presented in Table 4.6: article, verb tense, word choice, sentence structure, singular/plural form, preposition, modal/auxiliary, verb form, subject-verb agreement, run-on sentence, pronoun, fragment, infinitive/gerund, transition, parallel structure, and comparison structure. The data then were analyzed and presented qualitatively

with some revision examples of each error category. Table 4.11 presents those error

types, in which corrections were expected, at each revision stage.

Table 4.11 Error Types Expected to be Revised in Revisions 1& 2

Revision Stage	Error Types
Revision 1	article, verb tense word choice sentence structure singular/plural form preposition modal/auxiliary verb form
Revision 2	subject-verb agreement run-on sentence pronoun fragment infinitive/gerund transition parallel structure comparison structure

4.4.3.1 Revision of Article

Even though the use of articles seems to be the simplest as Thai

students have to study it since the beginning of English learning, it became the error

type made the most frequently, in this study. In Revision 1, all of the participants

revised their use of article as illustrated in Table 4.12.

Table 4.12 Examples of the Participants' Revised Sentences

No.	First draft (Pre-tests)	Revision 1
1	I had opportunity to visit the Dumnoen Saduak Floating Market with my friends.	I had _an_ opportunity to visit the Dumnoen Saduak Floating Market with my friends.
2	In a bedroom, there is picture of skateboard on the wall.	In _the_ bedroom, there is _a_ picture of _a_ skateboard on the wall.
3	I think it is good point for deaf persons, blind persons, and someone unable to read….	I think it is _a_ good point for _the deaf, the blind_, and someone unable to read…..

According to Table 4.12, article *an* was placed in front of *opportunity* because *a/an* was appropriate to be used with a noun mentioned for the first time, while sentence 2 was changed from a bedroom to the bedroom on account that the writer had already stated the word bedroom once before. Both sentences 2 and 3 added *a* in front of *picture*, *skateboard*, and *good point* as these three words were singular countable nouns. In sentence 3, the writer learned that *the + adjective* already meant a group of particular people; therefore, she used the deaf and the blind instead of deaf persons and blind persons.

4.4.3.2 Revision of Verb Tense

This error category could often be seen in narrative writing, and it was viewed as the second most frequently made error type by the participants. After Online Task 2, some sentences were revised in terms of tenses as displayed in Table 4.13 below.

Table 4.13 Examples of the Participants' Revised Sentences

No.	First draft (Pre-tests)	Revision 1
1	Two years ago, I have written my plans to visit Samui Island for my holiday.	Two years ago, I *wrote* my plans to visit Samui Island for my holiday.
2	I travel to Khaoyai National Park to see animals in the forest.	I *traveled* to Khaoyai National Park to see animals in the forest.
3	Then, we went to the hot spring. It is beautiful, and we stay overnight at Doyhuaynamdung.	Then, we went to the hot spring. It *was* beautiful, and we *stayed* overnight at Doyhuaynamdung.

Surprisingly, in almost all the pre-test paragraphs, the writers made a lot of mistakes regarding verb tense despite being assigned to write narrative stories as most of them tended to use present verbs rather than past verbs. It is apparently because of L1 interference; that is, there are no inflected verb tenses in the Thai language.

However, in Revision 1, significant improvements were detected in sentences 1, 2, and 3, in that all the simple present verbs were changed to past verbs.

4.4.3.3 Revision of Word Choice

Word choice is considered as difficult for student writers, especially for those who always think in Thai prior to writing in English or rely too much on electronic dictionaries. This error category does not seem easy since L2 student writers require a great deal of time to practice; that is to say, they must be skillful in terms of morphological knowledge so as to write English paragraphs effectively. Nonetheless, after Online Task 3, most of the participants could identify inappropriate words in their paragraphs and replace them with more suitable vocabulary.

Table 4.14 Examples of the Participants' Revised Sentences

No.	First draft (Pre-tests)	Revision 1
1	Thailand is a cultural thing that I like the most.	Thailand is a cultural *country* that I like the most.
2	The house must be built in European tone.	The house must be built in European *style*.
3	…because every morning, every house must open a television…	…because every morning, every house must *turn on* a television…

As can be clearly seen, the participant used unsuitable vocabulary in sentence 1, and after taking a careful look at the sentence, he realized that Thailand was not a thing but a country. Likewise, sentences 2 and 3 used two words that should not have been used in these contexts. The writers hence revised them again, changing from tone and open to style and turn on, respectively.

4.4.3.4 Revision of Sentence Structure

Online Task 4 emphasized sentence structures related to elements of sentences, word orders, and sentence types, comprising simple, compound, and

complex sentences, used in L2 writing. Due to the differences between Thai and English language systems, many participants produced their paragraphs, mainly based on the first language structures, which eventually caused such errors.

Table 4.15 Examples of the Participants' Revised Sentences

No.	First draft (Pre-tests)	Revision 1
1	In the house have 2 bedrooms, a living room, and a kitchen.	In the house, *there are* 2 bedrooms, a living room, and a kitchen.
2	My family went to Hua-Hin for two days. We bought a lot of food sea to eat in the evening.	My family went to Hua-Hin for two days. We bought a lot of *seafood* to eat in the evening.
3	In my living room is decorated with a white carpet.	In my living, *the floor* is decorated with a white carpet.

To briefly explain, subjects were missing in sentences 1 and 3; therefore, the writers completed them with *there are structure*, and the word *the floor*, while sentence 2 was rather different because it was incorrect in terms of word orders. In his revision 1, the writer rewrote this sentence to *"a lot of seafood"*, considered as grammatically correct according to the structural rules.

4.4.3.5 Revision of Singular/Plural Form

In contrast to English, the Thai language has no plural nouns, and when writing in English, errors pertaining to the use of singular/plural forms are made all the time. This error type should not be ignored because it can become fossilized easily. Online Task 5 focused on this grammatical feature for the participants to discuss with their group members in order to brush up their existing knowledge and revise their first drafts as effectively as possible.

Table 4.16 Examples of the Participants' Revised Sentences

No.	First draft (Pre-tests)	Revision 1
1	In my garden, I will grow crop, herb, fruit, and a lot of flower.	In my garden, I will grow *crops, herbs, fruits, and a lot of flowers.*
2	I met my friend and children at Songkran.	I met my *friends* and children at Songkran.
3	My older brother had many joke to tell everyone, and everyone was happy to hear his joke.	My older brother had many *jokes* to tell everyone, and everyone was happy to hear his *jokes*.

Considered from the number of errors as analyzed, most of the participants habitually forgot to use pluralizers in order to form plural nouns. Nevertheless, after group discussions on this error category and diary writing, the participants became more confident with it. As can be seen from the examples shown in Table 4.16, all the nouns in sentences 1, 2, and 3 were changed to the correct plural forms.

4.4.3.6 Revision of Preposition

Most errors found in the pre-test paragraphs were related to the use of prepositions of time, and prepositions with verbs and adjectives. The examples of errors and revised sentences were presented in Table 4.17.

Table 4.17 Examples of the Participants' Revised Sentences

No.	First draft (Pre-tests)	Revision 1
1	In the late afternoon, we arrived Chiang Mai and went to Doi Suthep.	In the late afternoon, we arrived *in* Chaing Mai and went to Doi Suthep.
2	But I am more interested television than a newspaper.	But I am more interested *in* television than a newspaper.
3	Last year in February 12, we went to Nakornphanom by car.	Last year *on* February 12, we went to Nakornphanom by car.

According to Table 4.17, it can be seen that a preposition was needed in sentences 1 and 2; thus, the writers put *in* after both *arrived* and *interested*. *Arrived in* here is one of the phrasal verbs, while *in* after *interested* is considered as a dependent

preposition. With regards to sentence 3, it was incorrect because normally we do not use *in* with days or dates, so in Revision 1, the writer replaced *in* with preposition *on*.

4.4.3.7 Revision of Modal/Auxiliary

Modal/auxiliary verbs have become one of L2 learners' difficulties when writing in English because of a variety of helping verbs and their varied functions, which are relatively different from the Thai language. Online Task 7 was particularly prepared in order to help the participants review their knowledge regarding modals and auxiliary verbs, and of course after the online discussions, they could revise their pre-test paragraphs with more confidence. Table 4.18 illustrates the examples of revised sentences from Revision 1.

Table 4.18 Examples of the Participants' Revised Sentences

No.	First draft (Pre-tests)	Revision 1
1	The door locked, so my family and I couldn't go into the house.	The door *was* locked, so my family and I couldn't go into the house.
2	I am get news from watching television more than reading news from a paper.	I ~~am~~ get news from watching television more than reading news from a paper.
3	I will to build it by myself in the future.	I will ~~to~~ build it by myself in the future.

In Revision 1, it was found that the participants were able to revise incorrect sentences as in sentence 1, the writer added *was* in order to form a passive structure, while *am* and *to* were deleted in sentences 2 and 3 on account that these words did not belong in the sentences.

4.4.3.8 Revision of Verb Form

This error type is caused by negative language transfer as there are no inflected verb forms in the Thai language. Therefore, a number of mistakes in terms of past verbs, part participles, present participles, especially the irregular forms, were

found in the pre-test paragraphs. Some examples of errors were presented in Table 4.19 below.

Table 4.19 Examples of the Participants' Revised Sentences

No.	First draft (Pre-tests)	Revision 1
1	In the evening, my mother cooked in the kitchen, and we setted the table for dinner.	In the evening, my mother cooked in the kitchen, and we _set_ the table for dinner.
2	I went to a shop with my Japanese friend call Akihabara.	I went to a shop with my Japanese friend _called_ Akihabara.
3	News on television is up-to-date and can be follow anytime.	News on television is up-to-date and can be _followed_ anytime.

In accordance with Table 4.19, in sentence 1, the writer misunderstood about the form of past verbs as she added *-ed* after the verb *set*. Therefore, in her revision, she changed from *setted* to *set* correctly. With regards to sentences 2 and 3, past participles were supposed to be used in order to form a passive structure and a participial phrase. In Revision 1, all the three sentences were revised correctly by the participants themselves.

4.4.3.9 Revision of Subject-Verb Agreement

This error type is also a big problem for Thai students when writing in English as there is no such restriction in the Thai language. Most of the participants made this error especially in descriptive and comparison/contrast writing. Table 4.20 illustrates errors made by the students and revised sentences.

Table 4.20 Examples of the Participants' Revised Sentences

No.	First draft (Pre-tests)	Revision 2
1	The garden has a fish pond because my father like fish and flowers. My mother like cooking, so…	The garden has a fish pond because my father _likes_ fish and flowers. My mother _likes_ cooking, so…
2	My bedroom is in the east and have many windows because…	My bedroom is in the east and _has_ many windows because…
3	Reading news from a paper make me have academic knowledge and pleasure.	Reading news from a paper _makes_ me have academic knowledge and pleasure.

As illustrated in Table 4.20, the three participants made mistakes in terms of subject-verb agreement as they forgot to use singular verbs with singular subjects. Nevertheless, in their revisions, it can be seen that all the errors were corrected by adding an S after each verb in order to make the verbs agree with the subjects.

4.4.3.10 Revision of Run-on Sentence

Run-on sentences can occur due to a lack of appropriate use of punctuations and conjunctions. Punctuation is critically important in English writing as it is used to break long sentences, set apart lists of nouns or verbs, and to separate a main clause from a subordinate clause. On the contrary, punctuation and word space in the Thai language is not necessary. Therefore, Thai student writers often produce sentences without the use of capital letters, periods, commas, colons, and semicolons, leading to incomprehensible paragraphs, which are difficult for readers to understand as presented in Table 4.21.

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Table 4.21 Examples of the Participants' Revised Sentences

No.	First draft (Pre-tests)	Revision 2
1	News on television is a medium that contains both images and sounds that we are working on we will work with us to be able to listen to the sounds at the same time.	News on television is a medium that contains both images and sounds. We can work and listen to sounds at the same time.
2	My dream house is not a very big house painted are white in a house decorated with colorful furniture.	My dream house is not a very big white house. In the house, it is decorated with colorful furniture.
3	It took four hours we got to the island to stay at the Coconut Beach Resort where we stay here.	It took four hours to get to the Island. We stayed at the Coconut Beach Resort.

It can be seen that all the three participants revised their sentences by using a period so as to break a long sentence into two short ones that were more understandable. Interestingly, according to sentence 3, the relative clause *where we stay here* was deleted because the writer found it unnecessary and had made the sentence redundant.

4.4.3.11 Revision of Pronoun

For the most part, Thai students are not familiar with English personal pronouns, especially subject and object pronouns, because in general, there is only one form of personal pronouns in the Thai language. Consequently, in this study, the participants sometimes used an object pronoun as a subject of a sentence, which was grammatically incorrect. The examples of errors and revised sentences are displayed in Table 4.22.

Table 4.22 Examples of the Participants' Revised Sentences

No.	First draft (Pre-tests)	Revision 2
1	I walked to the concert and after that me and my friends went to Tokyo Dome.	I walked to the concert and after that *my friends and I* went to Tokyo Dome.
2	I listen to music and me can do something together.	I listen to music and *I* can do something together.
3	…there were a lot of people who wanted us to hire them to take ours bag to the top of the mountain.	…there were a lot of people who wanted us to hire them to take *our* bag to the top of the mountain.

From sentences 1 and 2, it can be seen that the participants used object pronoun *me* as a subject of both sentences, but after participating in online discussion activities, they were aware of their mistakes and revised the sentences again, changing from *me* to *I*. With regards to sentence 3, the participant only misunderstood about possessive pronouns and adjectives. In her Revision 2, she thus used *our* instead of *ours* in order to modify the noun *bag*.

4.4.3.12 Revision of Fragment

Fragment, in this sense, means a broken or incomplete sentence. In this study, some students tended to use too many periods, which made sentence meanings incomplete and difficult to understand. In fact, a sentence must contain at least a subject and a verb, called a predicate, in English writing, while in Thai writing, it is not necessary to have both of them in order to form a good sentence. For example, it is acceptable to say "You beautiful." in Thai, but it should be "You <u>are</u> beautiful." in English. Table 4.23 illustrates some examples regarding fragment cases.

Table 4.23 Examples of the Participants' Revised Sentences

No.	First draft (Pre-tests)	Revision 2
1	The comparison between news on TV and news from a newspaper. Both of them are hard to compare.	News on TV and news from a newspaper are hard to compare.
2	My dream house. When I was a child, I had a dream about my future house.	About my dream house, when I was a child, I had a dream about my future house.
3	We went to the waterfall in Chiangmai. Very cold weather. Then we went to the hot spring.	We went to the waterfall in Chiangmai. The weather was very cold. Then we went to the hot spring.

In the students' revisions, the students showed that they understood more about sentence patterns. All the three sentences in the first drafts were not complete on account of a lack of essential sentence components like subjects and verbs as can be seen in sentences 2 and 3. However, after the revision, sentences 1-3 were complete and understandable. To clearly explain, student 1 used the noun phrase *News on TV and news from a newspaper* instead of *Both of them* to perform function as a subject, while student 2 made use of a comma in order to create a sentence modifier. Regarding student 3, she used *the weather* as a subject of a sentence, followed by *verb be*, which made the sentence complete.

4.4.3.13 Revision of Infinitive/Gerund

This grammatical feature requires Thai students to memorize a number of verbs followed by infinitives with to, without to, and gerunds. Therefore, errors can be expected if students are not familiar with the verbs they are using, and owing to the Thai structure, in which more than two verbs can be put together, Thai students also occasionally make this type of error in case of employing L1 structural systems in L2 writing.

Table 4.24 Examples of the Participants' Revised Sentences

No.	First draft (Pre-tests)	Revision 2
1	On the first day, my family went to Wat Phrataj Chorhae for pay respect to Phrataj, which was very beautiful.	On the first day, my family went to Wat Phrataj Chorhae _to_ pay respect to Phrataj, which was very beautiful.
2	There is a yard with many trees around for my family relax on holidays.	There is a yard with many trees around for my family _to_ relax on holidays.
3	You will practice analyze a newspaper by comparing news from different papers.	You will practice _analyzing_ a newspaper by comparing news from different papers.

According to Table 4.24, in sentences 1 and 2, the students used infinitive with to in their revisions in order to correct the errors in the first drafts, while the other student realized that she had to use a gerund after the verb *practice*, so she changed from *analyze* to *analyzing* in sentence 3.

4.4.3.14 Revision of Transition

In the Thai language, there are not so many transitions to be used in writing as in the English language, which causes such confusion to Thai students when writing English paragraphs. For this reason, many of them try to avoid using varied conjunctions as well as subordinating conjunctions by producing only simple sentences. However, to connect ideas and make a paragraph more coherent, transitions are still considered as essential.

Table 4.25 Examples of the Participants' Revised Sentences

No.	First draft (Pre-tests)	Revision 2
1	I love my family and my house. It is not just my house. It will be home for everyone in my family too.	I love my family and my house. It is not just my house. *However,* It will be home for everyone in my family too.
2	Although reading news from a paper is quite boring, but it offers you some advantages.	Although reading news from a paper is quite boring, ~~but~~ it offers you some advantages.
No.	First draft (Pre-tests)	Revision 2
3	The tourists liked sunbathing on this island because of it was quite, the weather was good.	The tourists liked sunbathing on this island because ~~of~~ it was quite, the weather was good.

As shown in Table 4.25, to the first sentence was added a transition *However* in order to show a contrast idea between two sentences, while sentences 2 and 3 display a misuse of transitions. To explain, when using *although*, it is not necessary to have *but* in an independent clause, and *because of* must be used with a noun phrase not a sentence.

4.4.3.15 Revision of Parallel Structure

This structure is related to the use of similar patterns/forms of lexicons connected by a particular transition such as *and, but, not only_but also, either_or, neither_nor*, and so on. Table 4.26 presents some examples of errors regarding parallel structures found in the students' pre-test paragraphs as well as revised sentences.

Table 4.26 Examples of the Participants' Revised Sentences

No.	First draft (Pre-tests)	Revision 2
1	My sister and I liked swimming, playing volleyball, and ride a bike.	My sister and I liked swimming, playing volleyball, and _riding_ a bike.
2	Watching news on television is fast, easy to understand, and economically.	Watching news on television is fast, easy to understand, and _economical._
3	I stood up and looking at the sea on the beach.	I stood up and _looked_ at the sea on the beach.

As can be seen, all the three sentences were revised by changing their word forms after the conjunction _and_ due to an error in Parallelism. In sentence 1, gerunds were required, while in sentence 2, a series of adjectives is used, and in sentence 3, the verbs should both be past tense.

4.4.3.16 Revision of Comparison Structure

In this study, comparison structure errors were frequently seen in comparison/contrast writing, since the genre requires this grammatical rule as illustrated in Table 4.27.

Table 4.27 Examples of the Participants' Revised Sentences

No.	First draft (Pre-tests)	Revision 2
1	I get news from a paper than from television.	I get _more_ news from a paper than from television.
2	Most people have no time to follow news, and they often watch news on TV because it is convenient more than reading news from a paper.	Most people have no time to follow news, and they often watch news on TV because it is _more_ convenient than reading news from a paper.
3	In my opinion, reading news from a paper is better watching news on television.	In my opinion, reading news from a paper is better _than_ watching news on television.

According to the three incorrect sentences as shown above, the errors the participants made were regarding the misplacement and/or omission of _more than_,

causing an incomplete comparison structure. In their revisions, in sentence 1, *more* was put in front of *news*, and in sentence 3, the student added *than* after *better* in order to form a comparative degree. With regards to sentence 2, the student only needed to move *more* before *convenient*, considered as grammatically correct in accordance with this structural restriction.

4.4.4 Summary of the SMCD Model Implementation

With regards to both quantitative and qualitative analyses in relation to the effects of the SMCD Model implementation on the reduction of grammatical errors in students' L2 writing, significant improvements were found in terms of grammatical accuracy in the students' writing. To summarize the results obtained from pre- and post-tests, diary writing, and document analysis of Revisions 1 and 2 point by point, demonstrated a significant reduction to be found in the participants' post-tests. Even though, when considered each error category of the three writing genres as presented in Table 4.10, there were still two error types, fragment and run-on sentence, which were not statistically significant, the total number of errors in the post-tests were significantly reduced. Nonetheless, to diminish errors regarding fragment, and run-on sentence, more practice is required to make Thai students become familiar with the English structures.

In terms of diary writing, after the completion of online tasks assigned each week, as expected, the participants felt more confident with their knowledge as they could apply what they had gained from the discussions into their writing revision. Due to a series of online collaborative discussions, the students had sufficient opportunities to review their previous knowledge; at the same time, they also learned more about new grammatical features, which were advantageous to their L2 writing effectiveness.

According to the results from the analysis of Revisions 1 and 2, the students were able to identify the errors in their pre-test paragraphs and could revise them somewhat grammatically correctly. In conclusion, after the implementation of the SMCD Model in this study, the effects on the reduction of grammatical errors in the students' English writing were demonstrable. Therefore, this model could be accepted as an effective treatment to help enhance L2 students' writing ability.

4.5 Answers to Research Question 4

What are the students' perspectives towards the SMCD Model?

To answer this research question regarding the students' perspectives on the SMCD Model, questionnaires and semi-structured interviews were employed. In Week 15, 35 participants were given questionnaires, and 15 of them, who gave the most contributions during the OCD process from each group, were selected for the interview. A 5-point Likert scale questionnaire used to investigate the participants' attitudes towards the SMCD Model implementation was divided into three major sections: 1) Perspectives on online collaborative discussion (OCD), 2) Perspectives on Facebook used for the OCD process, and 3) Perspectives on the online tasks used in the OCD process. With regards to the semi-structured interview, each participant was asked 8 questions in relation to the SMCD Model, and he/she could freely express opinions. All the answers obtained from the interview were recorded and kept confidential by the researcher.

4.5.1 Perspectives on Online Collaborative Discussion (OCD)

This section aimed at eliciting the participants' feelings and attitudes on the process of online collaborative discussion (OCD) via Facebook. The data obtained

from the five-point rating scale questionnaires were analyzed, using mean scores ($\bar{x}$)

and standard deviation (SD). The interpretation of the data analysis was based on the

following criteria:

4.51 – 5.00	=	Strongly agree
3.51 – 4.50	=	Agree
2.51 – 3.50	=	Neutral
1.51 – 2.50	=	Disagree
1.00 – 1.50	=	Strongly disagree

Table 4.28 The Participants' Perspectives towards Online Collaborative Discussion

Item	Statements	$\bar{x}$	SD
1	The OCD activities are simple and convenient for group discussions.	4.40	.81
2	Knowledge obtained from the OCD can be used to complete online tasks.	4.57	.61
3	The OCD encourages critical thinking skills and leads to knowledge construction.	4.66	.59
4	You prefer to have online collaborative discussion with group sizes of seven.	4.11	.76
5	You have fun and feel eager to share and exchange knowledge.	4.00	.80
6	At times, you feel you have got sufficient knowledge after the OCD activities.	4.14	.69
7	Knowledge obtained from the online discussion can make you aware of errors in your writing and correct them by yourselves.	3.97	.66
8	The online sources prepared by the teacher are helpful for scaffolding learning and task completion.	4.29	.75
9	Overall, the OCD can help you enhance your writing proficiency especially in terms of grammatical knowledge.	4.29	.83
	TOTAL	**4.23**	**.49**

N = 35

According to the data analysis as presented in Table 4.28, the total mean score

of the questionnaire was 4.23, which was interpreted that the participants agreed that

online collaborative discussion on Facebook did assist them to enhance their writing accuracy. To take a close look at each item, the students strongly agreed that the online collaborative discussion activities on Facebook encouraged their critical thinking skills, leading to knowledge construction ($\bar{x}$ = 4.66, SD = .59), and also the knowledge obtained could be used to complete online tasks ($\bar{x}$ = 4.57, SD = .61). Apart from these two items, the students agreed that the online collaborative discussion activities were simple and convenient for group discussions ($\bar{x}$ = 4.40, SD =.81), and the online sources provided by the researcher were helpful for scaffolding learning and task completion ($\bar{x}$ = 4.29, SD = .75). In addition, the students agreed that they had enough knowledge to revise their paragraphs after the OCD process ($\bar{x}$ = 4.14, SD = .69), and a group of seven members was perceived as appropriate ($\bar{x}$ = 4.11, SD = .76). During the online activities, the student agreed that they had fun and were eager to share contributions with other group members ($\bar{x}$ = 4.00, SD = .80); furthermore, due to the linguistic knowledge gained, they were aware of errors when revising their paragraphs ($\bar{x}$ = 3.97, SD = .66). Overall, the students concurred that the online collaborative discussion (OCD) was appropriate to be employed in an L2 writing class ($\bar{x}$ = 4.29, SD = .83) as it could help them with their grammatical accuracy improvement.

4.5.2 Perspectives on Facebook as Used for the OCD Process

This part comprised ten items, aiming to investigate the participants' perspectives on Facebook as it was used for the process of online collaborative discussion. The same criteria were used for the interpretation of the data analysis.

Table 4.29 The Participants' Perspectives on Facebook as Used for the OCD Process

Item	Statements	$\bar{x}$	SD
1	Facebook is simple and convenient to use for the OCD.	4.49	.66
2	You enjoy communicating and working with peers on Facebook .	4.29	.79
3	Facebook Group is appropriate to be used as an online discussion board.	4.29	.75
4	You enjoy writing a diary and posting it on Facebook Notes.	3.51	.89
5	You have no difficulty to use Facebook Message in order to submit completed tasks to the teacher.	4.17	.95
6	You prefer discussing on Facebook to discussing in class.	4.31	.83
7	You sign in Facebook whenever you can to check out discussion boards.	4.26	.70
8	You think Facebook is appropriate for teaching and learning English.	4.06	.72
9	You have already become a fan of Facebook.	4.23	.84
10	Overall, Facebook can serve your requirements in terms of online collaborative discussion and convenient communication with friends and teachers.	4.26	.65
	TOTAL	**4.19**	**.48**

N = 35

As can be seen from Table 4.29, the total mean value of this questionnaire was 4.19, from which it could be said that the students agreed that Facebook and its components were appropriate for the OCD process. When considered item by item, the students agreed that Facebook was simple and convenient ($\bar{x}$ = 4.49, SD = .66), it was fun working with peers on Facebook ($\bar{x}$ = 4.29, SD = .79), and Facebook group was appropriate to be used as an online discussion board ($\bar{x}$ = 4.29, SD = .75).

Interestingly, the students admitted that they preferred discussing on Facebook to discussing in a conventional class ($\bar{x}$ = 4.31, SD = .83), signed in Facebook whenever they were available to check a discussion board ($\bar{x}$ = 4.26, SD = .70), and already had become a Facebook fan ($\bar{x}$ = 4.23, SD = .84). Besides, the students agreed that they could submit completed online tasks to the teacher with no difficulty using Facebook Message ($\bar{x}$ = 4.17, SD = .95). They also said that they thought Facebook was appropriate for teaching and learning a language ($\bar{x}$ = 4.06, SD = .72). In terms of diary writing, the students agreed that they enjoyed writing diaries and posted them on Note ($\bar{x}$ = 3.51, SD = .89). Without a doubt, overall, the students expressed positive attitudes towards Facebook and its components used during the OCD process ($\bar{x}$ = 4.26, SD = .65).

4.5.3 Perspectives on the Online Tasks Used in the OCD Process

This section consisted of 23 items, investigating the students' perspectives on the 16 online tasks used in the OCD activities on Facebook. The same criteria were again employed for the data interpretation.

Table 4.30 The Participants' Perspectives on the Online Tasks Used in

the OCD Process

Item	Statements	$\bar{x}$	SD
1	The instructions and objectives of online tasks are clear to follow.	4.49	.61
2	The designs of the task contents are useful to your writing enhancement in terms of grammatical structures.	4.37	.73
3	Each online task consisting of only one error category is appropriate for your language levels.	4.29	.62
4	Online Task 1 is suitable for your knowledge construction. (article)	4.46	.61
5	Online Task 2 is suitable for your knowledge construction. (verb tense)	4.46	.61
6	Online Task 3 is suitable for your knowledge construction. (word choice)	4.51	.61
7	Online Task 4 is suitable for your knowledge construction. (sentence structure)	4.51	.61
8	Online Task 5 is suitable for your knowledge construction. (singular/plural form)	4.46	.61
9	Online Task 6 is suitable for your knowledge construction. (preposition)	4.37	.55
10	Online Task 7 is suitable for your knowledge construction. (modal/auxiliary)	4.43	.56
11	Online Task 8 is suitable for your knowledge construction. (verb form)	4.49	.56
12	Online Task 9 is suitable for your knowledge construction. (subject-verb agreement)	4.51	.56
13	Online Task 10 is suitable for your knowledge construction. (run-on sentence)	4.51	.61
14	Online Task 11 is suitable for your knowledge construction. (pronoun)	4.46	.74

Item	Statements	$\bar{x}$	SD
15	Online Task 12 is suitable for your knowledge construction. (fragment)	4.43	.74
16	Online Task 13 is suitable for your knowledge construction. (infinitive/gerund)	4.43	.74
17	Online Task 14 is suitable for your knowledge construction. (transition)	4.46	.61
18	Online Task 15 is suitable for your knowledge construction. (parallel structure)	4.49	.61
19	Online Task 16 is suitable for your knowledge construction. (comparison structure)	4.46	.70
20	You had enough time to complete each online task.	4.11	.83
21	After completing online tasks, you have gained your own understanding and can revise your own paragraph.	4.17	.71
22	Online tasks are appropriate for online group discussions, and every group member felt free to discuss each weekly online task.	4.23	.77
23	Overall, provided online tasks helped you enhance your writing ability in terms of grammatical structures.	4.54	.70
	TOTAL	**4.42**	**.49**

N = 35

With regards to Table 4.30, the total mean value of this section was 4.42; that is to say, the students agreed that the online tasks used were appropriate for knowledge construction in terms of grammatical structures. Considered item by item, it can be seen that the students strongly agreed that Online Tasks 3, 4, 9, and 10, which were regarding word choice ($\bar{x}$ = 4.51, SD = .61), sentence structure ($\bar{x}$ = 4.51, SD = .61), subject-verb agreement ($\bar{x}$ = 4.51, SD = .56), and run-on sentence ($\bar{x}$ = 4.51, SD = .61), respectively, were suitable for their syntactic improvement.

Also, the students agreed that the other online tasks were appropriate to be used in the OCD process, including Online Task 8 ($\bar{x}$ = 4.49, SD = .56), Online Task 15 ($\bar{x}$ = 4.49, SD = .61), Online Task 1 ($\bar{x}$ = 4.46, SD = .61), Online Task 2 ($\bar{x}$ = 4.46, SD = .61), Online Task 5 ($\bar{x}$ = 4.46, SD = .61), Online Task 11 ($\bar{x}$ = 4.46, SD = .74), Online Task 14 ($\bar{x}$ = 4.46, SD = .61), Online Task 16 ($\bar{x}$ = 4.46, SD = .70), Online Task 7 ($\bar{x}$ = 4.43, SD = .56), Online Task 12 ($\bar{x}$ = 4.43, SD = .74), Online Task 13 ($\bar{x}$ = 4.43, SD = .74), and Online Task 6 ($\bar{x}$ = 4.37, SD = .55). Apart from the suitability of all the online tasks, the students agreed that the instructions and objectives of the online tasks were clear to follow ($\bar{x}$ = 4.49, SD = .61), the designs of the task contents were useful to their grammatical enhancement ($\bar{x}$ = 4.37, SD = .73), including only one grammar point in each online task was appropriate ($\bar{x}$ = 4.29, SD = .62), and online tasks were suitable for online group discussions ($\bar{x}$ = 4.23, SD = .77). They agreed that after each online task, they gained more understanding and could use it for their writing revisions ($\bar{x}$ = 4.17, SD = .71), and they had enough time to complete each online task ($\bar{x}$ = 4.11, SD = .83). Last but not least, overall, the students strongly agreed that the provided online tasks did help them enhance their writing ability in terms of grammatical knowledge ($\bar{x}$ = 4.54, SD = .70).

All in all, according to the analysis of the data obtained from the questionnaires, it is reasonable to conclude that all the students expressed positive attitudes towards the SMCD Model in the three aspects as follows: 1) the online collaborative discussion process, 2) Facebook and its components, and 3) the online tasks. To add rigor to the data in terms of the students' perspectives on the model, a semi-structured interview was also employed, and the qualitative analysis of the interview data follows in the next part of this chapter.

4.5.4 Qualitative Analysis of Students' Perspectives on the SMCD Model Obtained from the Semi-Structured Interview

The semi-structured interview was conducted after the completion of Online Task 16 with 15 students, chosen from among those students who gave the most contributions from each group. The data obtained from the interview (see Appendix H) were transcribed verbatim and categorized into three categories for the analysis: the students' preferences between online discussion and classroom discussion, the students' perspectives on advantages of the SMCD Model, and appropriateness of the SMCD Model for writing improvement.

4.5.4.1 The Students' Preferences between Online Discussion and Classroom Discussion

According to the interview data, it can be seen that almost all of the students preferred discussion on Facebook to discussion in classroom due to the fact that online discussion gave them more opportunities to work with classmates and to consult the teacher anywhere and anytime. In other words, online discussion provided them with convenience in terms of place and time. The following statements were taken from the students who thought online discussion was better than classroom discussion.

> *I prefer discussion on Facebook because I have more time to work with friends, and I also have opportunities to consult the teacher anytime. Furthermore, I like typing discussions on Facebook as my handwriting is not good. (Student 5)*

> *I like Facebook because it is convenient, and I can work at home. Also, I have more time to think of the answers and search for more knowledge in order to help discuss on each online task with group members. (Student 6)*

There were also some students who may have preferred online discussion, but they did not mind working in a classroom, since both of discussion types had their own advantages and disadvantages. Students 2 and 4 stated:

> *I like both. I can discuss with friends face-to-face, but discussion on Facebook is more convenient as I can work with friends anywhere and anytime.*

> *I like discussion on Facebook because I do not have to work in class. However, I like both as they are different. Classroom discussion offers an opportunity to see facial expressions and gestures when discussing with friends, while online discussion does not have these.*

Nonetheless, there were only two students who preferred classroom discussion since they believed that a conventional class or face-to-face discussion could encourage students to discuss and learn more than autonomous learning as Students 1 and 15 said:

> *I still prefer discussion in classroom because I have more opportunities to talk to the teacher and friends directly.*

> *I like classroom discussion because I like talking to friends and the teachers face-to-face. It makes me understand the lessons more.*

In sum, from the data, there were three stances on preferences between online or classroom discussions: a preference for online discussion, acceptance of either online or classroom discussion, and a preference for classroom discussion. Although there were some students, who still believed in the traditional way of discussion, the majority of the students either preferred working on Facebook or found it acceptable because of the commonly voiced reasons such as ease of use, convenience, modernity, popularity, and so on as Student 6 said, "Facebook is considered as trendy because a large number of people are using it nowadays".

4.5.4.2 The Students' Perspectives on Advantages of the SMCD

Model

Apparently, all the students found the SMCD Model advantageous to their writing development in terms of grammatical accuracy. The online tasks and the process of online discussion helped them review their existing knowledge and gain new experiences that they had not learned before as they mentioned:

> *I think that it helped me review some grammar points that I had forgotten. I understand more about word choice, sentence structure, and tenses because of the online discussion activities. (Student 10)*

> *It is so useful because every online task helps me review my grammatical knowledge and practice writing revisions. As a result, I understand the nature of linguistic structures more and finally I am quite confident with my writing in terms of accuracy. (Student 9)*

In addition to obtaining syntactic knowledge, the students were relatively confident with their writing as they could apply what they had learned to revisions. Some students said that after completing each online task, they could identify errors in their paragraphs and correct them. As Student 15 mentioned, "I can recognize the errors made in my writing and correct them by myself". Interestingly, a student said in the interview that the SMCD activities could encourage students who did not like homework to work on their assessments because online discussions were not boring, and he also could do something else along with doing his homework such as listening to music or playing online games, which seemed so relaxing and entertaining.

In a nutshell, 100% of the students found the SMCD Model beneficial to their L2 writing improvement as it helped enhance their grammatical accuracy, review their previous knowledge, and helped allow them to feel more confident with English

writing, and last but certainly not least, it motivated the students to learn and do assignments more, since online discussions on Facebook were perceived as interesting and enjoyable.

4.5.4.3 Appropriateness of the SMCD Model for Writing Improvement

According to the interview data, the SMCD Model, in both the online tasks and the online collaborative discussion process, was considered as appropriate to help improve the students' writing accuracy. The students certainly appeared to be fond of the activities during the online discussion since they had fun and felt more comfortable when working with friends on Facebook. In terms of the appropriateness of online tasks, some students stated:

> *The online tasks were suitable as each consisted of only one grammar point, so I didn't feel confused when working on it. (Student 4)*

> *I think they are very appropriate because I can learn grammars from them indirectly. I had fun when working on them with my group members. (Student 8)*

Apart from the online tasks as just mentioned, the students also found the SMCD process appropriate for such knowledge construction, especially using Facebook as a means for discussion as they mentioned:

> *It is good. It helps me save time because I can talk to the teacher anytime for the whole week, which is better than conventional classrooms. Discussion on Facebook helps me understand the lessons very well. Whenever I sign in Facebook, I can learn English with everyone. So, I think discussion on Facebook is very appropriate for me to improve my writing. (Student 4)*

> *Facebook is considered as trendy because a large number of people are using it nowadays. It can be used for discussion, communication, and many more things. Also, I*

think the online discussion activities on Facebook are suitable as they do encourage students to practice writing. (Student 6)

In my opinion, Facebook offers me a wide range of educational opportunities. Discussion on Facebook helps me develop my grammar for my English writing. (Student 8)

According to the students' statements as shown above, the students thought that they could also make great use of Facebook in order to learn English with others, and the online discussion activities were perceived as suitable for their writing improvement in terms of grammatical structures.

4.5.5 Summary of the SMCD Model Assessment

In accordance with the quantitative and qualitative analyses regarding the students' perspectives on the SMCD Model, the students consistently expressed positive attitudes on the model's components, including Facebook, online tasks, diary writing, and the process of online collaborative discussion. Practically, the model was an appropriate way to enhance the students' writing accuracy, since all of them, who both responded to the perspective questionnaires and were interviewed by the researcher, felt that their grammatical knowledge had increased after participating in online group discussions. Further, the students strongly agreed that all the knowledge gained could be used in their writing revisions.

In conclusion, it was apparent that the SMCD Model could be considered as an effective model that helped to enhance L2 students' grammatical accuracy in English writing. To describe the SMCD Model clearly, Chapter 5 presents a complete flowchart of the SMCD Model, to be referred to from now onwards as the Somchai SMCD Model, and its components with particular details.

CHAPTER 5

SOCIAL MEDIA COLLABORATIVE DISCUSSION

MODEL FOR GRAMMATICAL ERROR REDUCTION

IN L2 WRITING: THE SOMCHAI SMCD MODEL

The Somchai SMCD Model basically aims to assist EFL students to work collaboratively in order to construct knowledge that can be used for their writing enhancement. That is, the constructed knowledge in terms of linguistic properties can be beneficial to the learners' writing revisions as they will become more aware of the nature of syntactic structures and avoid making such errors when writing a paragraph. This chapter presents the model components, the Somchai SMCD flowchart, steps of the Somchai SMCD Model, and the pedagogical implications of the Somchai SMCD Model.

5.1 Components of the Somchai SMCD Model

According to the students' needs as described in Chapter 4, the components of the Somchai SMCD Model are social media (in this case, Facebook), online tasks, and comments for online collaborative discussion.

5.1.1 Facebook

In the study, the students were expected to collaboratively discuss a given task through a social networking service. As mentioned in Chapter 2, Facebook was

chosen because of its multifunctionality and simple use. Brief details regarding its major components used in the process of online collaborative discussion (OCD) sessions are illustrated in Figure 5.1.
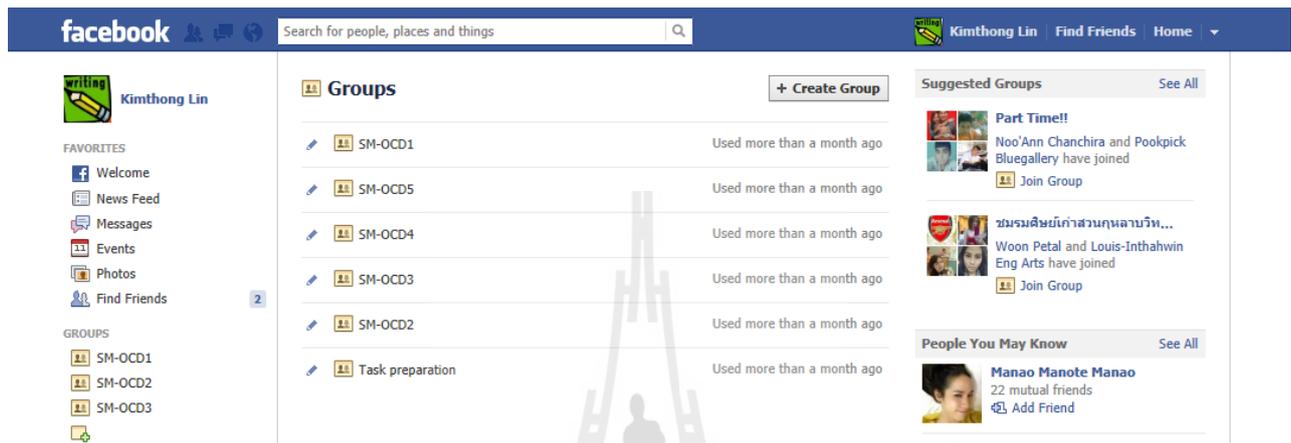
Figure 5.1 Facebook Front Page (http://www.facebook.com)

The five components on Facebook used during the online collaborative discussion process are (1) Profile, (2) Friends, (3) Groups, (4) Messages, and (5) Notes.

5.1.1.1 Profile

This component displays a user's personal information, for example, basic status, hometown, appearances, ethnicity, education, occupation, etc. When students subscribe as a member of Facebook, they are required to provide some personal details. This enables members to know each other. It is also convenient for teachers to follow up on students' collaboration and participation in the OCD activities.

5.1.1.2 Friends

In order to become online friends, users must send their requests and wait for the acceptance. Prior to the OCD process, students have to add a teacher as a Facebook friend so as to make an online community. Also, users who have already been friends can view others' profiles, post comments on blogs and comment spaces on the profile page, and read what is posted on Notes. Besides, it also shows the online or offline status of each friend, which is convenient when users need to communicate to one another synchronously or asynchronously.

5.1.1.3 Groups

This component is mainly used in the process of online collaborative discussion as all online tasks are to be prepared for the participants to discuss on a blog. Also, Facebook allows each user to create as many groups as needed. Consequently, it is convenient for teachers to divide their students into small groups to work with their group members on a particularly assigned blog. In doing this, all of the participants will have equal opportunities to participate in the collaborative discussions.

5.1.1.4 Messages

After each task is completed by students, a representative of each group must submit a complete assignment to teachers via Facebook Messages. Apart from serving as a means for task submission, it also enables teachers to privately contact users who encounter unexpected problems and to assist them during the process of online collaborative discussion (OCD).

5.1.1.5 Notes

In addition to online discussion through groups, *Notes* is a space where users can post their perspectives, ideas, knowledge, and so on to let other online friends read what they have written. As a result, this function is principally used for two purposes: 1) for teachers to post the course syllabus and other useful online sources to help students review their previous language input to complete the assigned tasks with group members, and 2) for students to write diaries to inform as well as to summarize what they have learned after each discussion session.

5.1.2 Online Tasks for the Somchai SMCD Model

Due to the importance of tasks as mentioned in Chapter 2, the provision of online tasks to be used should be thus dependent upon authentic problems the participants are encountering. Furthermore, all tasks are to be purposefully prepared, based on integration, implementation, and knowledge construction. The process of task preparation is presented in Figure 5.2.

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┌─────────────────────────────────────────────────────────────────────┐
│           Problem identification for grammatical error categories      │
└─────────────────────────────────────────────────────────────────────┘
                                    ⬇
┌─────────────────────────────────────────────────────────────────────┐
│  Preparation of online tasks with learning objectives, instruction,    │
│         and practical contents based on each grammatical structure      │
└─────────────────────────────────────────────────────────────────────┘
                                    ⬇
┌─────────────────────────────────────────────────────────────────────┐
│                  Task contents validated and verified                  │
└─────────────────────────────────────────────────────────────────────┘
          ⬇                                             ⬇
┌──────────────────────────────┐         ┌──────────────────────────────┐
│  Prepared online sources      │         │  Contents of online tasks      │
│  related to online tasks for   │         │  emphasizing correction at     │
│  learners' scaffolding         │         │  paragraph level               │
│  learning and task achievement │         │                                │
└──────────────────────────────┘         └──────────────────────────────┘
```

Figure 5.2 Process of Online Task Preparation

5.1.3 Comment Preparation Training for the Somchai SMCD Model

In order to effectively participate in the online discussion environment, the participants should be properly trained how to prepare reasonable comments. Based on the conceptual framework presented in Chapter 2, four types of comments can be shared and posted on the discussion space.

1) *Discussion for knowledge verification*: After receiving each online task, which is particularly provided according to the error categories found in students' writing, the group members work on the task given and, at the same time, share their discussions on group blog, and look at their friends' contributions in order to give feedback. In doing this, the students can present and exchange the knowledge they have with other members.

2) *Discussion for knowledge negotiation*: In case of the disagreement in terms of knowledge shared, the students can post comments with

particular reasons and explanations why this knowledge is problematic or ambiguous. Meanwhile, other knowledge that is considered advantageous to the task completion can also be posted as an alternative selection for other members to use.

3) *Discussion for knowledge acceptance*: After discussion for knowledge negotiation, the students have to decide which knowledge is appropriate to be employed in order to complete the given tasks. Here, comments with reasons and explanations can be posted on the provided online space.

4) *Discussion for knowledge construction*: When gaining knowledge from the discussion sessions, the students make use of it in order to complete the assigned tasks and then post what they have done with the tasks so as to show their comprehension and knowledge implementation. In this stage, every online member is able to return to the first stage again in order to verify, negotiate, accept and eventually implement the knowledge, which every member has just accepted.

Since the primary purpose of the OCD is to ensure that students make full use of the knowledge gained, not to improve their language proficiency, it should be done in their native language. The relationship of each type of comments is presented in Figure 5.3.
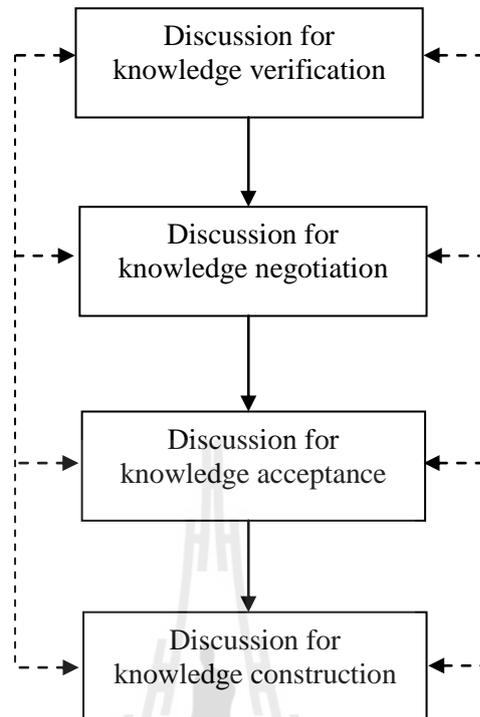
Figure 5.3 Relationship of Each Type of Comments

5.2 The Somchai SMCD Model Flowchart

In accordance with the results of this study presented in Chapter 4, a model of Social Media Collaborative Discussion (the Somchai SMCD Model) via Facebook was systematically created.
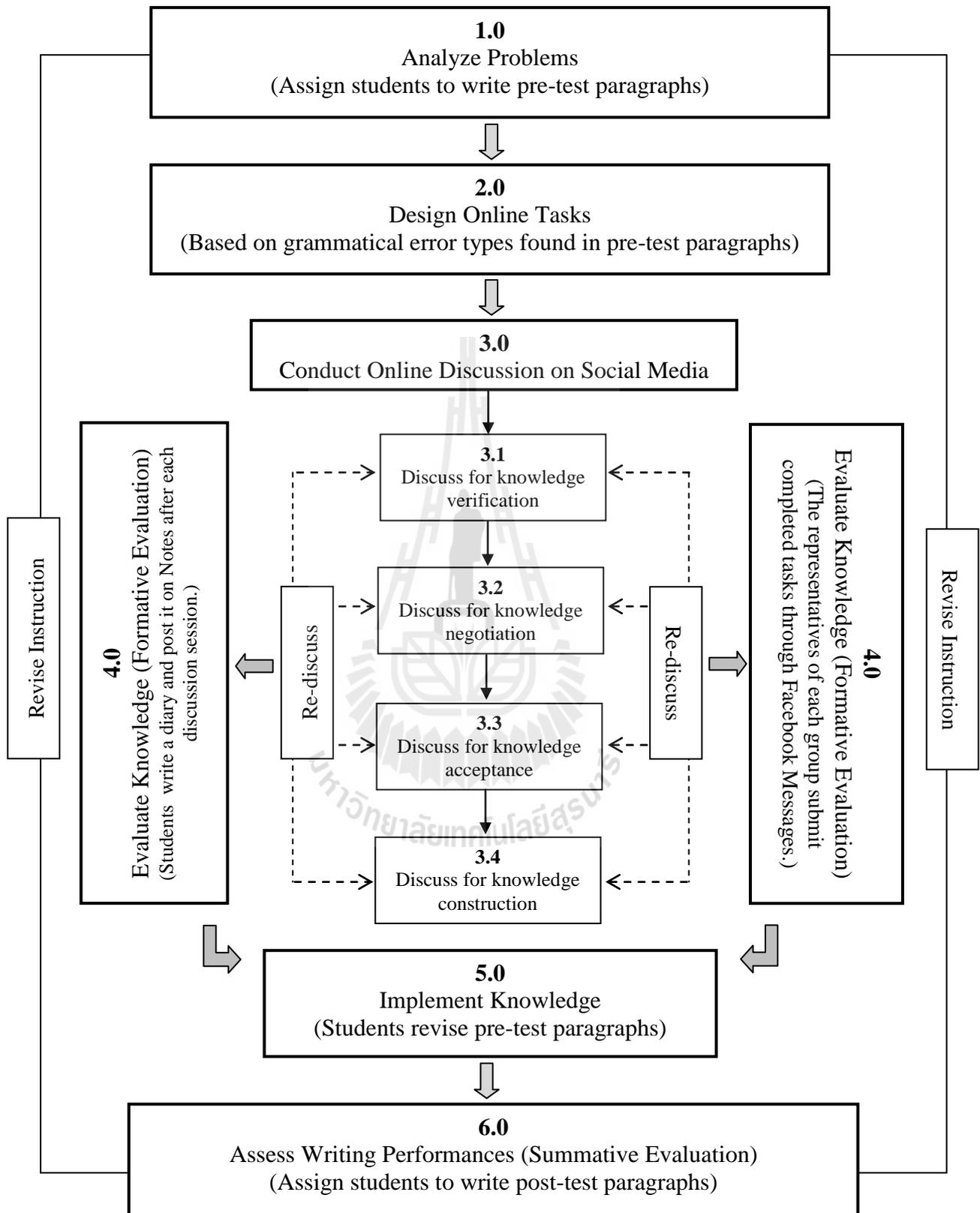
Figure 5.4 Flowchart of the Somchai SMCD Model

5.3 Six Steps of the Somchai SMCD Model

According to the flowchart of the Somchai SMCD Model, there are six major steps of knowledge construction.

Step 1.0 Analyze Problems

In order to design an appropriate online task for students' collaborative discussions, particular problems must be initially analyzed. A pre-test is therefore employed in this step in order to examine learners' previous knowledge and their straights and weaknesses. One of the writing problems of second-year English major students at Thepsatri Rajabhat University is grammar; consequently, to help them enhance their writing accuracy, problems in terms of grammatical structures should be detected.

In this main study, the students were assigned to write pre-test paragraphs in three writing genres, namely narration, description, and comparison/contrast, of at least 150 words each. Then, their paragraphs were analyzed so as to identify problems with regards to grammatical errors. There were 16 grammatical error types identified from students' paragraphs.

Step 2.0 Design Online Tasks

After analyzing problems from students' pre-tests, online tasks are then created based on those problems. The objectives, instructions, and contents in online tasks should be clear and precise. Thus, before the implementation, every online task must be validated and verified its suitability and effectiveness by experts in a particular field of studies.

In the process of online collaborative discussion, there were 16 online tasks created by the researcher, all of which were based on the problems found from the

students' pre-test paragraphs and also validated by the experts in teaching L2 writing. In this study, the students were divided into five groups. Each online task (see Appendix I for 16 online tasks) was posted on all the five Facebook groups for the students to discuss and work together on it with their members.
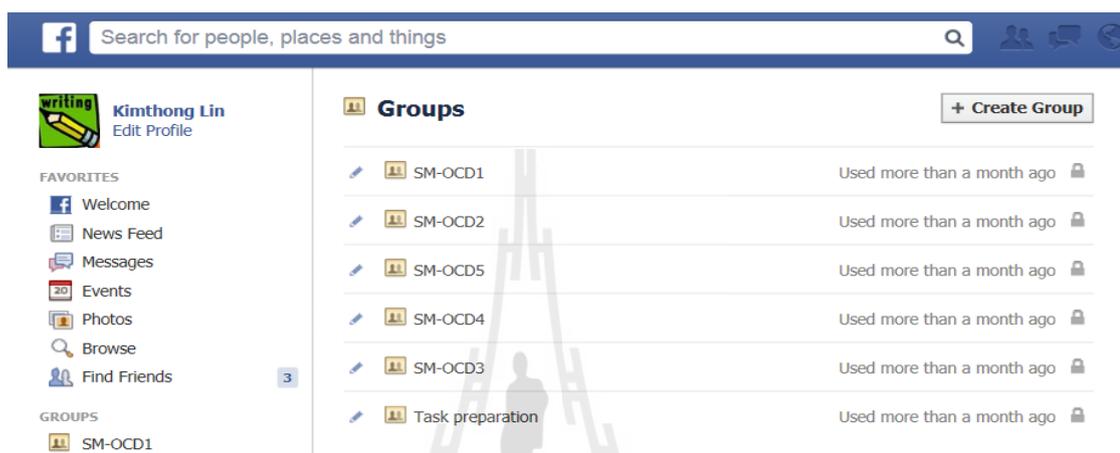
Figure 5.5 Divided Groups on Facebook

Figure 5.6 An Example of Online Task Posted on Facebook Group

Step 3.0 Conduct Online Discussion on Social Media

Once an online task is posted on social media, students start working on it. In this step, students have opportunities to share their ideas regarding the solutions for the tasks with other group members. The agreement and disagreement with the knowledge or solutions contributed can be equally negotiated by every member until they have got a final outcome or applicable knowledge that can be used to solve the problems in the online tasks. To make the discussions effective, students should be allowed to discuss in their native language. An example of the way students discussed online tasks on Facebook in this study is illustrated in Figure 5.7.

Figure 5.7 Examples of the Way Students Discussed Online Tasks on Facebook

Besides, in order to assist students' online discussions, a teacher can prepare supplementary materials related to a provided online task and post them on Messages. The materials can be brought from the Internet or other sources, considered as useful

and appropriate to students' scaffolding learning. In addition, during the discussions, a

teacher can play a role as an assistant, who stands by on social media, when students

need suggestions. This can be done either synchronously or asynchronously.

Figure 5.8 Examples of Downloading Websites for Supplementary Materials
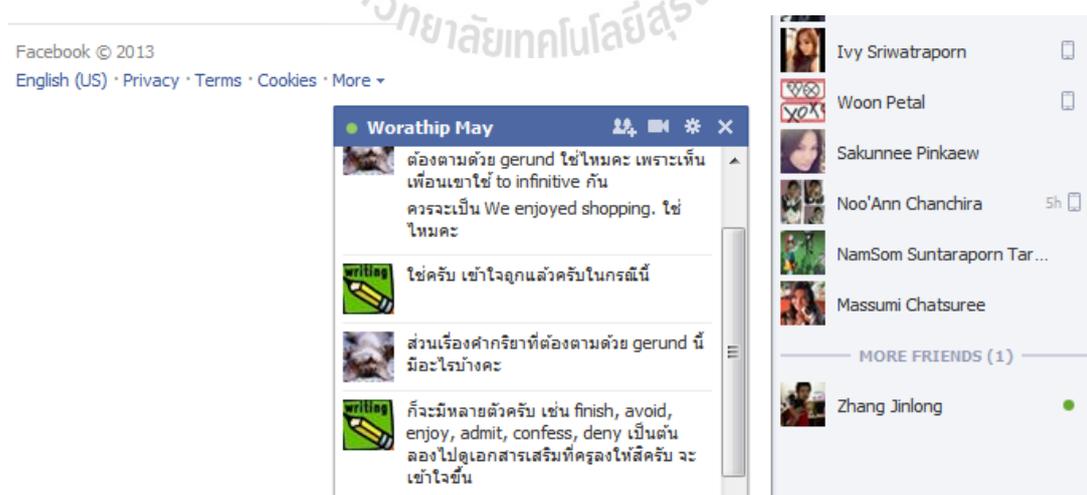
Figure 5.9 An Example of Synchronous Communication between the Teacher and

a Student

According to the Somchai SMCD Model, there are four sub-steps of online collaborative discussion for knowledge construction, referred to grammatical knowledge in this study. Practically, when students go from Step 3.1 to Step 3.4 of the discussions, to re-check their understandings, they can re-discuss the uncertain knowledge with their members. That is, students can discuss to verify and to negotiate their knowledge again before coming up with the final constructed knowledge.

Step 3.1 Discuss for Knowledge Verification

In this sub-step, students make use of their own knowledge to solve the problems by themselves and then post their contributions on Facebook as comments for other members to see so as to check whether they agree or disagree with the contributions. Some examples of this type of discussions obtained from the students' real contributions are as follows:

> I think in Line 1 of the paragraph, the word *Big garden* was mentioned for the first time, so it should be written with an indefinite article as *My dream house is a small house with a big garden*. Am I correct?
>
> In Line 9, the sentence *'you can receive news more faster and more quickly than...'* is wrong, I guess. *Faster* is already a comparative form, so it does not need *more* here.
>
> In Line 23, the sentence *' I bought some flowers from she.'* is wrong in terms of a personal pronoun. *She* should not be used as an object in this sentence. I think it should be changed to *her*.

Step 3.2 Discuss for Knowledge Negotiation

When members do not agree with their friends' contributions, they can express their opinions or negotiate with the comment owners. To do this, alternative solutions

are presented in groups, and other members can determine which contributions are accepted to be used to solve the problems. Some examples of discussion for knowledge negotiation are as follows:

> I agree with Wimontip's discussion but not all. She corrected Wantana's comment quite well, but I need to say that she forgot to change *feel* in the sentence to *felt*. It then should be revised as *'I enjoyed the trip very much and <u>felt</u> so happy'*.

> According to Sakunnee's contribution, she said *the* should be put in front of *everything*. I don't think it is correct as *everything* is an indefinite pronoun, and *the* cannot be used with it.

> I think Wantana's comment is not correct. She said it should be "*I have enjoyed the trip very much and feel so happy'*. In my opinion, past simple should be used in this sentence as this event already happened in 2003. So, I would write *'I enjoyed the trip very much and feel so happy'*.

Step 3.3 Discuss for Knowledge Acceptance

After online discussion for knowledge negotiation, students decide which contributions are applicable, and then they show their agreement through comments. Some examples of the students' comments are as follows:

> I do agree with Krongkran. She said *gooder* is an incorrect form of comparative degree, and the correct one is *better*. I would also revise the sentence as *'In my opinion, watching news on television is <u>better</u> that reading news from a paper'* like what she did.

> I think what Sakunnee revised is correct. She said *most memorable and unforgettably trip* is wrong in terms of parallel structure as she changed from *unforgettably* to *unforgettable*.

I think some of the comments on *'Mine lunch was noodles with crabs, spicy papaya salad,...'* are acceptable as all of them used *My* instead of *Mine*. I agree with them because in this sentence, a possessive adjective should be used to modify *lunch* rather than a possessive pronoun.

Step 3.4 Discuss for Knowledge Construction

The knowledge obtained from online collaborative discussion, which every member in each online group helps one another construct, is used to complete an online task. In the discussions, students show confidence with their knowledge gained from members' contributions. Some examples are as follows:

I am quite certain with my revision because *finished* must be followed by a gerund. So, I revised the sentence again as *'I finished swimming'*. Apart from finished, there are also some verbs followed by a gerund like practice, enjoy, etc.

I found that the appropriate use of commas and periods is also necessary to form a good sentence. The sentences *'I will be doing. By myself. In conclusion. I like reading news from a paper.'* are kind of broken. So, I would change to *'I will be doing by myself. In conclusion, I like reading news from a paper'*.

I have learned some rules about parallel structure from the discussions, so I think this sentence *'On the way, the traffic was rather badly, busily and boring because...'* is wrong. I am quite sure that before and after conjunction *and* should be adjectives not adverbs. I thus changed it to *'On the way, the traffic was rather bad, busy and boring because...'*.

All in all, Step 3.0 is perceived as genuine construction of knowledge, since the development of students' learning can be seen from Step 3.1 to Step 3.4 through their knowledge contributions and discussions on Facebook. Nevertheless, evaluation

is still required in order to examine students' acquired knowledge which is done in Steps 4.0 to 6.0.

Step 4.0 Evaluate Knowledge

This step comprises two types of knowledge evaluation: evaluating from students' diary entries and from completed online tasks. To clarify, after each online task, students must write a diary in relation to the knowledge they have obtained from the discussion sessions with peers and post it on Notes. Also, students are allowed to keep writing diaries in their native language in order to get effective data for evaluation. Apart from students' diaries, a representative of each group must submit a completed online task, which each member in the group helps one another to finish, to the teacher through Facebook Messages. The diary entries and completed online tasks are used to evaluate students' grammatical knowledge. This is called *a formative evaluation* which takes place during the model implementation.

Figure 5.10 An Example of Student's Diary Entry
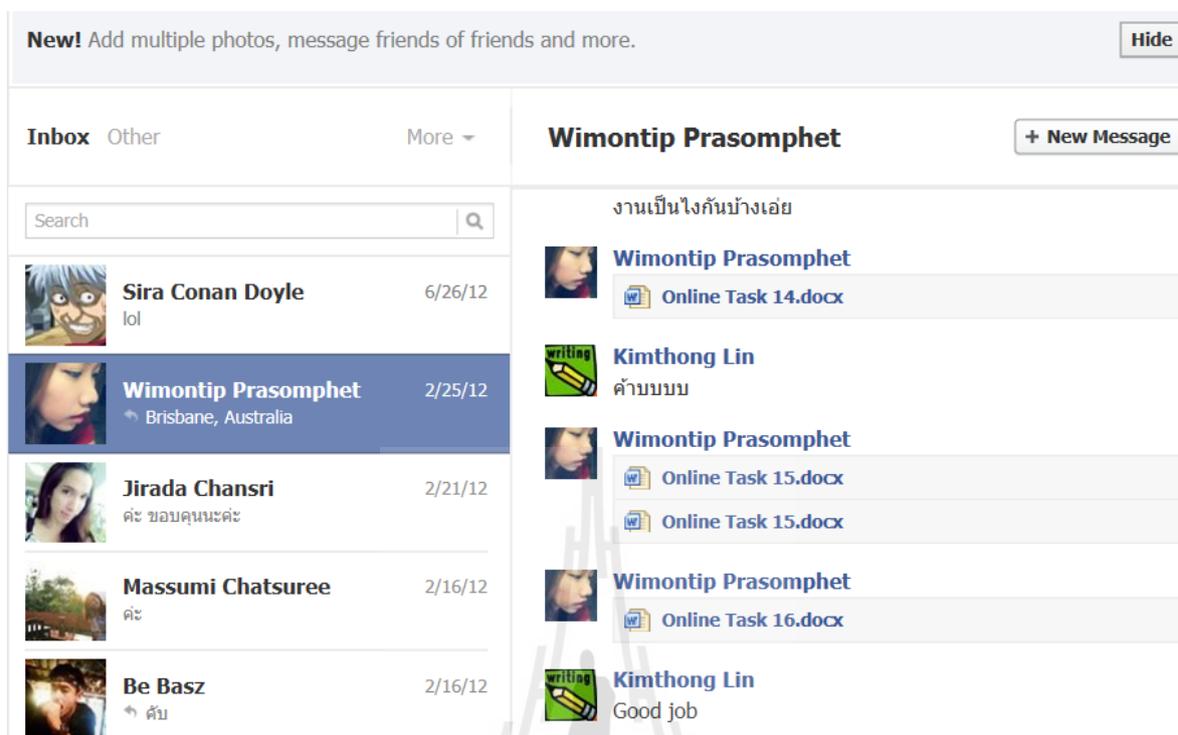
Figure 5.11 Submission of Completed Online Tasks (Attached Files) via Messages

Step 5.0 Implement Knowledge

The purpose of this step is to encourage students to make use of their knowledge in revising written works which is considered as a crucial writing process. In this step, students revise their pre-test paragraphs after particular online tasks, depending on a teacher's decision.

In the present study, the students revised their pre-test paragraphs two times after Online Tasks 8 and 16. This made it possible for the researcher to examine how well students implemented the gained knowledge in their revisions. Students' Revisions 1 and 2 were then submitted in class, and feedback was provided for them by the researcher.

Step 6.0 Assess Writing Performances

This step is to evaluate students' learning outcomes; that is, their ability to produce a paragraph with more accuracy is assessed, which is called *a summative evaluation*. It means that providing students' overall performances in terms of grammatical structures in L2 writing are higher, the Somchai SMCD Model could be considered as effective to help students reduce grammatical errors in their English writing. To assess writing performances, students are thus assigned to write post-test paragraphs, which will then be analyzed to find out whether students' writing is more effective and accurate.

5.4 The Pedagogical Implications of the Somchai SMCD Model

The Somchai SMCD Model is mainly used to enhance EFL students' L2 writing based on online collaborative discussion for construction of grammatical knowledge. To apply this model in a writing course, teachers should understand each step of the model clearly, as presented in the flowchart of the Somchai SMCD Model. Since a particular group of students may have different problems in terms of grammar, Step 1.0 of the model, Identify Problems, is essential for writing teachers to take into consideration and carefully conduct this part. Therefore, teachers should bear in mind that the effectiveness of students' learning depends on online tasks designed and produced according to the problems found in a particular context.

Equally Important, students are to discuss online tasks with their members on social media; consequently, English levels and ages of learners should also be taken into account. That is, students must be matured enough to be responsible for themselves when working online, and their English grammatical knowledge must be

at a level that makes them feel comfortable when discussing online tasks with friends. During the online discussion sessions, teachers should monitor students' contributions continuously and be available to provide them with assistance when needed. It can be seen that apart from online tasks, the effectiveness of the model implementation is also dependent upon the devotion of teachers and students throughout the course.

In conclusion, it is reasonable to say that the Somchai SMCD Model, with its sound theoretical framework and methodological development, should be advantageous for writing teachers who are interested in using online technologies to motivate students and enhance their writing proficiency, especially regarding grammatical accuracy.
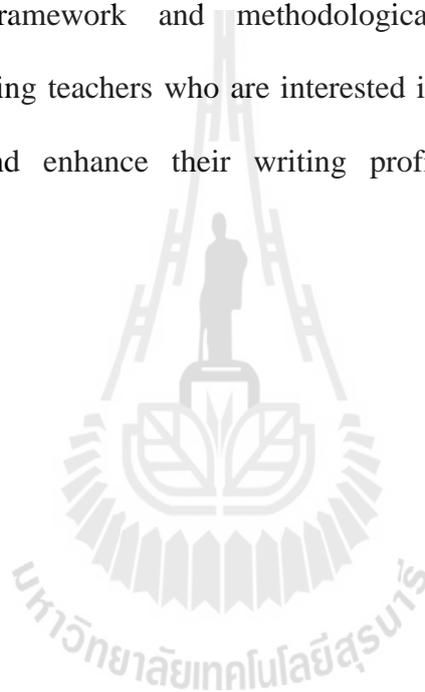
CHAPTER 6

CONCLUSION, DISCUSSION, AND

RECOMMENDATIONS FOR FURTHER STUDIES

This chapter presents conclusion of the study results, discussion of the implications of research findings regarding three main issues: grammatical error categories found in the current context, the effects of the Somchai SMCD Model upon L2 writing in this context, and discussion on the implications of the Somchai SMCD Model, and recommendations for further studies.

6.1 Conclusion of the Research Findings

This section summarizes the research findings of each research question regarding the development of the SMCD Model, grammatical error categories found in three writing genres, the effects of the SMCD Model on the reduction of grammatical errors in L2 writing, and the students' perspective on the SMCD Model.

6.1.1 Summary of Answers to Research Question 1

What are the components in developing a model of Social Media Collaborative Discussion (SMCD) for the reduction of grammatical errors in EFL university students' writing?

The SMCD Model used in this study was created based on the Brahmawong's Seven - Step Model for Prototype R&D Development, starting from, review of related body of knowledge, conduct a survey of needs analysis assessment, develop a

conceptual framework of the prototype, survey of experts' opinions, develop the first draft of the SMCD Model, try out and trial run, and revise and finalize the SMCD Model. According to review of the related literature and the data obtained from needs analysis questionnaires, a conceptual framework of the model was created with necessary components used in the SMCD process and then verified by three experts. The result of assessment showed that the components used in the SMCD Model were highly satisfactory and appropriate to be implemented in an actual setting ($\bar{x} = 4.58$, SD = .235). Most importantly, after the implementation of the main study, all the participants were satisfied with the SMCD Model as they obtained considerable knowledge from the online activities, performed well in their post-tests, and felt more confident with L2 writing.

6.1.2 Summary of Answers to Research Question 2

What are the grammatical error categories identified from the three types of genres, namely narration, description and comparison/contrast?

This study emphasized the error categories found in three writing genres, namely narration, description, and comparison/contrast. It was found that all the three genres shared most of the same error types but with different rates of occurrence, from the most to the least frequent errors made. To summarize, in narrative writing, the error types began with verb tense, article, word choice, sentence structure, preposition, singular/plural form, modal/auxiliary, verb form, pronoun, infinitive/gerund, fragment, run-on sentence, parallel structure, transition, subject-verb agreement, and comparison structure, respectively, while the error categories found in descriptive writing were article, word choice, sentence structure, singular/plural form, preposition, subject-verb agreement, modal/auxiliary, verb form,

run-on sentence, fragment, verb tense, infinitive/gerund, transition, pronoun, parallel structure, and comparison structure, in that order. Due to the nature of narrative writing, in which past tense was mainly used to narrate a story, the students therefore tended to make errors about verb tense. On the other hand, descriptive writing errors were most often article, word choice, and subject-verb agreement. In terms of comparison/contrast, as expected, comparison structure was often used by the students to express comparative ideas. Consequently, this error type became the 9[th] most frequent errors in this genre. Additional error categories found in comparison/contrast writing were word choice, sentence structure, singular/plural form, article, subject-verb agreement, modal/auxiliary, preposition, verb form, comparison structure, pronoun, run-on sentence, verb tense, transition, infinitive/gerund, fragment, and parallel structure, respectively.

6.1.3 Summary of Answers to Research Question 3

What are the effects of the SMCD Model on the reduction of grammatical errors in EFL students' writing?

According to the findings presented in Chapter 4, the SMCD Model did affect the students' grammatical improvement positively. As can be seen in their post-tests, the grammatical errors were significantly reduced when compared to the pre-tests. In addition, the obvious improvements pertaining to grammatical structures were seen in the students' Revisions 1 & 2 and their diary writing. Therefore, in this study, the SMCD Model had demonstrable effects on the reduction of grammatical errors as it helped the students enhance particular linguistic knowledge which could be used in L2 writing.

6.1.4 Summary of Answers to Research Question 4

What are the students' perspectives towards the SMCD Model?

In terms of the students' perspectives on the SMCD Model after the implementation, it was found that the students agreed that the OCD process could help them enhance writing proficiency regarding grammatical structures ($\bar{x}$ = 4.29, SD = .83), and Facebook could serve their requirements concerning online collaborative discussion and convenient communication with friends and teachers ($\bar{x}$ = 4.26, SD = .65). Moreover, the students strongly agree that the online tasks which were provided helped them enhance their writing ability in regard to syntactic knowledge ($\bar{x}$ = 4.54, SD = .70). In the interviews, all of the students said they found online discussion on Facebook convenient, flexible, interesting, trendy, and enjoyable. They admitted that they were motivated by the activities, and most of them preferred working online to studying in a conventional classroom.

6.2 Discussion

Since this study focused on the development of a social media collaborative discussion model for grammatical error reduction in EFL students' English writing, the main discussion was related to identification of writing problems in this particular context, the effects of the model on L2 writing enhancement, and the implication of the Somchai SMCD Model.

6.2.1 Grammatical Error Categories Found in the Current Context

Basically, a good revision is needed during the process of writing in order to make a paragraph/an essay more accurate. Some knowledge regarding L2 linguistic properties is thus essential, and the level of that knowledge proportionate to the tasks

at hand. Ferris (2004) mentions that being aware of error types can help student writers revise their drafts effectively. As a result, apart from grammatical knowledge, to be able to correct errors, students have to understand the causes of their errors, most commonly differences between L1 and L2 systems. Therefore, the first angle of this research was the categorization of error types made by this group of language learners, *problem identification*. According to the results of this study pertaining to error categories as presented in Table 4.6 in Chapter 4, there were 16 error types found: article, verb tense, word choice, sentence structure, singular/plural form, preposition, modal/auxiliary, verb form, subject-verb agreement, run-on sentence, pronoun, fragment, infinitive/gerund, transition, parallel structure, and comparison structure. Compared to other studies on errors in other contexts, the categories found in the current context were somewhat similar in some extent.

Interestingly, the findings that made this present research different from other studies could be the error frequency found in each genre. As can be seen, most of the studies as mentioned in Chapter 2, examined errors in a particular genre. However, this study found that the frequency of occurrence of grammatical error types found in each genre was different, whereas the point was not investigated in some studies like those conducted by Maros et al., Abushihub et al., and Sattayatham and Honsa which focused on only grammatical error identification. Maros et al. (2007) examined grammatical errors made by Malaysian students. The findings demonstrated that their errors were the use of articles, subject-verb agreement, and copula 'be'. As can be seen, both Malaysian and Thai students had similar grammatical error categories in the use of articles, subject-verb agreement, and auxiliary verbs. In addition, Abushihub et al. (2011) categorized grammatical errors in writing into six major

categories: tenses, prepositions, articles, active and passive voice, verbs, and morphological errors with prepositions and morphology, the two most frequent error types.

Sattayatham and Honsa (2007) examined error types found in Thai medical students' paragraphs. They categorized errors as follows: tense, wrong use of verb to be, spelling mistake, wrong use of verb, article, omission of subject, subject – verb agreement, direct translation, conditional sentence (unreal present, unreal past), connector, wrong choice of vocabulary, wrong plural form, infinitive (purpose), capitalization, punctuation, wrong use of pronoun, fragment of sentence, wrong order of adverb, passive voice, possessive, run-on sentence (two complete sentence joined by a comma), omission of verb, relative pronoun (whose/who), wrong form of noun, complex sentence without conjunction, comparative & superlative, and question tag. According to the categories as shown, it can be said that in a Thai context, error types were also kind of related as they shared the same characteristics in regard to grammatical restrictions, for example, subject-verb agreement, tenses, word choice, fragment, and so on. It means that not only Thai students but also foreigners, who study English as a second language, make the same mistakes in their English writing.

In order to reduce errors in L2 writing, Maros et al. (2007) and Abushihub et al. (2011) suggested the development of teaching pedagogies, textbooks, and syllabus designs to be taken into consideration. Nonetheless, as stated earlier, prior to taking teaching materials and approaches into account, error categories in each text type should be considered as the first step to develop teaching aids and course syllabi. That is to say, a writing teacher has to prioritize what kinds of errors, especially in each different genre, should be initially focused on, which much of the prior research failed

to mention. According to the results of this study, it can be seen that each writing genre had different rates of error frequency. Consequently, it is strongly argued that when teaching writing, a genre also has an impact on error categories.

6.2.2 Effects of the Somchai SMCD Model

The Somchai SMCD Model was mainly created to encourage students' online discussion so as to construct the particular knowledge that they could use in their writing revisions, leading to the reduction of grammatical errors. After the implementation of the model, there are two effects to be discussed.

6.2.2.1 Effects on the Students' Perspectives towards Facebook

In accordance with the results presented in Chapter 4, the students expressed positive attitudes towards using Facebook for online discussion as they found it flexible in terms of time and place. As a result, most of the students said they were motivated by the activities assigned each week and offered collaboration encouragement to other group members. Gao et al. (2009) support that online discussion is different from a traditional classroom as it promotes a learner-centered approach and emphasizes collaborative participation in an online environment, which is perceived as new and enjoyable to learners. As can be seen, during the online process, the students tended to exchange knowledge and give contributions to their friends. In doing this, they could enhance grammatical knowledge and memorize the rules by themselves. Lundstrom and Baker (2009) state that L2 students who frequently transfer knowledge to other people can improve their skills rather than those only receiving assistance. As was found with Chou and Chen (2008), and Muñoz and Towner (2009), on account of Facebook, the students were fully engaged in the online discussions and their perspectives on using social media for learning

English were positive. It is thus credible to say that Facebook could increase learners' motivation and active collaboration.

6.2.2.2 Effects on the Improvement of Students' Writing Accuracy

After the implementation of the Somchai SMCD Model, the effects on the improvement of students' writing were obviously positive as presented in Chapter 4 in that the students' grammatical accuracy in post-tests was much better. It can be concluded that online discussion helped the students with the construction of knowledge. Sapp and Simon (2005) conducted a comparative study between face-to-face and online courses, and they found that most of the students, who took the online business writing course, preferred learning online to learning in classroom as they considered it convenient and flexible. Sapp and Simon concluded that when students feel comfortable to learn something, they can perform their ability more effectively. Similarly, the students in this main study had sufficient time to work on their online tasks with their group members; therefore, at the end of each online task, such knowledge constructed by them was expected.

With regards to the results of this present study, the students' writing improvement could be seen through post-tests as grammatical errors of most of the error types were significantly reduced. However, based on the total error reduction in the three writing genres, two types of errors were not significantly reduced after the implementation of the Somchai SMCD Model, compared to the others. They were run-on sentence and fragment. Since the major cause of writing errors is the negative transfer of the first language properties, it therefore takes time for students to become familiar with the new language systems, while the positive transfer of L1, having the same structures as L2, helps encourage students' L2 writing accuracy. Therefore, to

enhance students' L2 writing and to reduce grammatical errors of run-on sentence and fragment, considered as L1 interference in this case, more exercises regarding these two error types, continual practice with feedback from teachers, and students' awareness raising, considered as one of the approaches that helps L2 learners improve their grammatical knowledge, are strongly recommended.

Regarding writing revisions of the students' pre-tests and their diary entries, it can be seen that the students could recognize errors and revise their sentences properly. This shows the effectiveness of revisions to enhance students' comprehension in terms of syntactic features. Theoretically, revisions can be done in three ways: teacher revision, peer revision, and self revision, all of which aim at improving writing accuracy. Kaweera and Usaha (2008) studied the effects of different types of teacher feedback on university students' writing. The results revealed that after receiving feedback or teacher revision, the students could correct their errors accordingly. Nonetheless, this present study emphasized the revisions based on the students' knowledge gained from the online discussion activities; consequently, all the corrections done by the students were from their own abilities to be aware of the errors themselves and to correct them independently. This emphasis is clearly more challenging for the students than only receiving feedback/revision from the teacher.

In conclusion, the students' writing accuracy was considerably improved as they could produce post-test paragraphs with fewer errors, compared to their pre-tests. Also, during the implementation of the Somchai SMCD Model, they demonstrated their understanding regarding grammatical structures through their revisions and diaries satisfactorily. In addition to the students' writing improvement, because of

such knowledge gained, the students expressed more confidence with their English writing.

6.2.3 Discussion on the Implications of the Somchai SMCD Model

As all the activities in this study were based on the Somchai SMCD Model, the process of online discussion was designed and implemented systematically. After the implementation, all the participants expressed high level of satisfaction with the online activities and their learning progress. From this, the researcher concludes that the model proposed in this study is appropriate for tertiary EFL students to improve their L2 writing. This research falls squarely within the research that has investigated teaching through social media in general (Sap and Simon, 2005; Lundin, 2008). Where the current study stands district is in the systematic model that was developed to improve students' writing effectiveness in terms of grammatical structures. The Somchai SMCD Model was therefore particularly designed in order to address this issue. To make this model more applicable, three factors which may contribute to the effectiveness of the Somchai SMCD Model are discussed.

6.2.3.1 Appropriate Provision of Online Tasks

Online tasks used in the Somchai SMCD Model should be based on a real problem the students are encountering. To clarify, prior to providing an online task for students to discuss, teachers should take into consideration types of grammatical structures. Since each language is different in terms of syntactic properties, grammatical errors can be expected at all times. Furthermore, most of these errors happen because student writers rely on their first language and transfer some structural features into their L2 writing. To provide effective online tasks, which

can be used to enhance students' writing accuracy, grammatical error categories of each language should be initially identified.

6.2.3.2 Appropriate Selection of Social Media

An appropriate social network used in the Somchai SMCD Model may be dependent on particular contexts. In this study, Facebook was selected because of its broad-based popularity, and most students worldwide are familiar with it, according to the data of needs analysis assessment. These sorts of technological issues are changing rapidly; Facebook itself is only a few years old, and may not exist in a few more years. To use another social network in another environment, some components may have to be reconsidered. However, many social networks are relatively similar in terms of their functions and components; therefore, it should be teachers' responsibility to adapt and adjust the Somchai SMCD Model according to the online services they select.

6.2.3.3 Generic Nature of the Somchai SMCD Model

The Somchai SMCD Model can be used to enhance many other language skills, on which teachers may need to focus. The model was designed to be adaptable for other goals, for example, reading for comprehension, peer revision technique in L2 writing, translation, and so on. Consequently, adaptation of the Somchai SMCD Model requires that online tasks be designed in accordance with a particular language focus and the problems that are defined as requiring intervention.

In summary, not only does the Somchai SMCD Model aim to enhance EFL students' grammatical accuracy in English writing, but it is also adaptable and dynamic, depending on a particular context, course requirements, students' and teachers' needs, and availability of social media in each environment. Thus, this

model could be used as guidance for language teachers interested in language instruction enhanced by technology on account of its flexibility and ease of use.

6.3 Recommendations for Further Studies

As always mentioned, this research was related to grammatical errors in three writing genres, namely narration, description, and comparison/contrast, and the use of online technology to promote autonomous learning as well as online discussion in order to assist learners to construct particular knowledge that could be used to reduce grammatical errors in L2 writing. The model, which was employed in this study, was systematically created and named "the Somchai SMCD Model". Since online technologies are playing a growing role in education nowadays, studies in terms of technology enhanced language learning should be further conducted. Here are three major recommendations for further research, which are consistent with the implications of the Somchai SMCD Model mentioned in the Discussion Section.

6.3.1 As claimed, grammatical errors may be similar or different in some other contexts based on the nature of L1 syntactic features. Therefore, in terms of problem identification, studies regarding grammatical errors can be conducted in other language learning contexts and with more writing genres, for example, argumentation, explanation, persuasion, and so on.

6.3.2 In this study, Facebook was selected to be used in the SMCD process because it was viewed as the most popular and convenient social network by the students. Nonetheless, there are always a number of new social networks coming out all the time, and in the future, there may be something more popular or useful than Facebook. Therefore, some components of the Somchai SMCD Model can be

adjusted in order to serve online collaborative discussion. That is, researchers may employ other social networks which they consider suitable in their contexts for the SMCD activities.

6.3.3 In the present study, the Somchai SMCD Model was used to reduce grammatical errors in L2 writing. The researcher believes that this model can still be employed to enhance students' other language skills or other writing features such as organization, content, mechanism, and so on. Therefore, it is worth conducting a study using the Somchai SMCD Model with different language focuses.

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APPENDIX A

Narrative paragraph writing test

Name_____ **Surname**_____**ID Number**_____

Instruction: Within one hour, write a paragraph of at least 150 words on the topic

below.

<div align="center">"My Memorable Trip"</div>

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Descriptive paragraph writing test

Name_____ **Surname**_____**ID Number**_____

Instruction: Within one hour, write a paragraph of at least 150 words on the topic

below.

"My Ideal House"

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Comparison/contrast paragraph writing test

Name_____ Surname_____ID Number_____

Instruction: Within one hour, write a paragraph of at least 150 words on the topic

below.

"Watching News on Television vs. Reading
News from a Paper"

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APPENDIX B

Examples of incorrect sentences found in students' paragraphs from the data of the preliminary study

The following examples are incorrect sentences found in the students' paragraphs of all the three writing genres, illustrated according to each error type. There were 16 error categories identified in the preliminary study, consisting of singular/plural form, sentence structure, verb tense, word choice, subject-verb agreement, the use of articles, preposition, verb form, run-on sentence, fragment, modal/auxiliary, to-infinitive/gerund, pronoun, comparison structure, parallel structure, and transition, respectively.

1. **Singular/plural form:** The students, at times, omitted 'S' at the end of plural nouns, which caused such errors in L2 writing. The examples of the wrong sentences written by the students are:

   - *In the garden, I have a lot of <u>pet</u> and flowers.*

   - *I am among <u>a flower</u>.*

   - *It has various kinds such as fish, <u>whale, shark</u>, tiger fish and <u>ray</u>.*

2. **Sentence structure:** The students forgot subjects when writing sentences. Indeed, in the Thai language, it is common to begin a sentence with a verb; however, in English, it is considered wrong. In addition, the misplace of words is also included in this category. The example of the incorrect sentences are:

- *The thing that I remember in the travel is the place where <u>beautiful the air is good</u>.*

- *Khaokho is very pretty. <u>Is </u>well known as a place where the weather is cool.*

- *But also <u>is</u> a very important place in the history of the country.*

3. **Verb tense:** This is perceived as a chronic problem of Thai student writers due to the fact that in the Thai language, when talking about past actions, it is no need to change any forms of verbs. The wrong sentences written by the students are:

- *I <u>go</u> to see the crocodile show that someone <u>takes </u>the head inside the mouth of a crocodile.*

- *Last year, everybody <u>travel</u> at the sea in Pattaya.*

- *In the morning, I <u>see</u> the white mist with the sun shining light…*

4. **Word choice:** This error category includes the misuse of vocabulary in terms of word meanings and word classes. This problem occurred because the students employed the strategy of direct translation. The examples are:

- *The train made me feel <u>excitement</u> and <u>happiness</u>.*

- *<u>It is the "train string die".</u>*

- *The travel is attractive for <u>my remember.</u>*

5. **Subject-verb agreement:** This error can be often seen in descriptive and comparison/contrast writing since the students wrote in present tense. As a result, at times, they did not add 'S' at the end of verbs for the third person singular subjects. The wrong sentences are:

- *<u>Chiangmai have</u> many interesting places.*

- *The flower garden have sunflowers, roses, orchids and cherry trees.*

- *It have a small font and many words.*

6. **The use of articles:** As clearly seen, in the Thai language, there are no articles used for any nouns. Therefore, it also becomes the students' difficulty when writing in English. The examples of the wrong sentences are:

- *Sea is my memorable trip.*

- *Khao Kor Mountain is one of popular places in Thailand.*

- *In garden, have a lot of pest and flowers.*

7. **Preposition:** Apparently, the students always misused the prepositions in order to tell time like days, months, years, seasons, and so forth. However, some types of prepositions, with which the students were not familiar, especially prepositions with verbs, called phrasal verbs, also caused such trouble to the students when writing. Besides, some students also omitted prepositions in sentences where needed. The wrong sentences are:

- *I go up the tour bus to the sea on my family.*

- *Saturday I had a chance to see the waterfall Kanchanaburi.*

- *Between the travel, I like to look the scenery around.*

8. **Verb form:** This error type may be somewhat similar to the error category of verb tense; nevertheless, in the pilot study, some errors of verb forms, comprising present participle, past verbs, and past participle were also incorrectly written by the students. The wrong sentences are:

- *This tour made me knows my warm many family.*

- *I like to watching and listening more than reading.*

- *It may <u>be make</u> me to bore. And the newspapers <u>are report</u> only once per day.*

- *I can <u>writing and reading</u> better than I didn't <u>reading</u>.*

9. **Run-on sentence:** Due to the Thai language systems, when writing or speaking in Thai, more than one subject or verb can be used in a sentence, which is determined wrong in English. The wrong sentences are:

- *I <u>have eat</u> food at the sea side with family.*

- *It <u>makes give see view</u> beautiful scenery.*

- *We <u>have go to walk see, walk shop</u> for in order to seize deposit a friend.*

10. **Fragment:** In accordance with the Thai language systems, no periods are used in a paragraph; in addition, incomplete sentences are still accepted. As a result, when the students wrote, a lot of fragmented sentences were detected in their paragraphs. The wrong sentences are:

- <u>*Since world war second*</u>*. It made hearts thrilled.*

- <u>*My unforgettable travel*</u>*. First, on new year festival is a holiday for many days.*

- <u>*The travel to Bungchawak with my friends*</u>*.First, I go to ……*

11. **Modal/auxiliary:** As a rule, when writing in English especially in negative and interrogative sentences, such auxiliaries are required. Also, the use of "be" is also considered necessary as it performs functions as a helping verb used to link between a subject and an adjective in order to make a complete sentence. The examples of this error category are:

- *I <u>happy</u> and amused with my travel that <u>I not</u> expect before.*

- *I will don't forget this tours in this time.*

- *It is worth because it very pretty.*

- *It will must have large size and have the area.*

12. **To-infinitive/gerund:** This category is related to verb form, yet the students were still confused with the use of V-ing and infinitives with to and without to. The errors found in the sentences are:

- *The travel is attractive for remember and impress again.*

- *Small house is worthwhile and then it easily for clean.*

- *I like play activities with my family.*

- *So we have to save the world by use less paper.*

13. **Pronoun:** The errors found in the pilot study were mainly because of the different forms of subject and object pronouns unlike the Thai language, which has only one form of each pronoun. The wrong sentences are:

- *The journey makes I and my friends remember forever.*

- *Me and friends went to see a lot of things.*

14. **Comparison structure:** This error type was seen in comparison/contrast writing on account that the students needed to write one thing in comparison with another thing. As a result, the misuse of comparison could be expected as shown in the following sentences:

- *…, television is useful than the papers.*

- *Although a newspaper is lower price than television but it has lots of dangerous substance.*

15. **Parallel structure:** In order to produce a correct English sentence, a similar pattern of two or more words connected by a coordinating

conjunction should be taken into consideration. This is also considered as Thai students' problems when learning to write English. The examples of incorrect sentences are:

- *I prefer <u>watching news</u> on television than <u>read news</u> from the paper.*

- *Because I don't like <u>reading news</u> but <u>listen</u> narration by others.*

16. **Transition:** It is relatively different from the Thai language as in English, there are a number of transitional words used for a variety of purposes. As a result, according to the preliminary study results, the students misused some transitions in their English writing. The wrong sentences are:

- *<u>Although</u> it's modern <u>but</u> the outside house has Japanese garden.*

- *<u>When</u> I read the paper finish <u>after</u> I will throw it into the bin.*

APPENDIX C

Needs Analysis Questionnaire

This questionnaire is prepared in order to survey learners' needs in using social networks to practice writing skill, based on social media collaborative discussion (SMCD), which is beneficial to the course of Writing Strategies in English. It is comprised of two main sections: students' general information in using the Internet, and students' needs in relation to social networks and online tasks for the SMCD Model.

Instruction: Honestly answer each item according to your needs.

Part 1: Students' general information in using the Internet

1. Where do you mostly use the Internet?

   ☐ University ☐ Internet café ☐ Home/dormitory

2. How often do you use the Internet per week?

   ☐ More than 5 days ☐ 3 – 4 days ☐ Fewer than 2 days

3. How much time do you use the Internet per day?

   ☐ More than 6 hours ☐ 3 – 4 hours ☐ Fewer than 2 days

4. When do you normally use the Internet in a day?

   ☐ Morning ☐ Afternoon ☐ After class

   ☐ Evening ☐ Any time if possible

5. What are your purposes of using the Internet?

☐ Online games ☐ Knowledge ☐ Communication

☐ Movies & music ☐ Information download ☐ Others………………

6. Have you ever used the Internet or social networks for learning discussions with classmates?

☐ Yes ☐ No

7. In your opinion, which social network is the most popular?

☐ Facebook ☐ MySpace ☐ Twitter ☐ Hi5

Part 2: students' needs in relation to social networks and online tasks for the SMCD Model

1. Which social network will you choose for the SMCD activities?

☐ Facebook ☐ MySpace ☐ Twitter ☐ Hi5

Reasons...

2. How many members should be there in a online group?

☐ 9-10 ☐ 7-8 ☐ 5-6

3. How many grammar points should be included in one online task?

☐ 1 ☐ 2 ☐ 3

Reasons…………………………………………………………………

4. Do you want the instructor to prepare learning materials for your online discussions?

☐ Yes ☐ No

5. How long do you want to work online with you group members for an online task?

☐ 3 days ☐ 4 days ☐ 5 days

6. After online tasks each week, you want to submit the complete tasks…..

☐ by a group representative ☐ by yourself

7. How do you present your knowledge gained from the SMCD activities?

☐ write a diary and post it on Facebook

☐ take a test weekly

8. After the SMCD activities, do you want to revise your written paragraphs?

☐ Yes ☐ No

Reasons…………………………………………………………………………..

9. What do you expect to get from the course?

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Your good cooperation is appreciated.

APPENDIX D

The semi-structured interview questions used in the pilot study of the draft SMCD Model

The following questions were used in the interview session with 10 selected participants of the pilot study.

1. Do you think online collaborative discussion via Facebook can assist you to enhance your English writing skills in terms of grammatical accuracy? If yes, how does it help you?
2. Between online discussion on Facebook and face-to-face discussion, which one do you prefer? Why?
3. What are your attitudes towards online collaborative discussion (OCD) via Facebook?
4. Do you think online tasks provided on Facebook are suitable for your writing practice? If yes, how are they appropriate?
5. Overall, do you think Facebook itself and online collaborative discussion are advantageous for you to foster your knowledge and writing enhancement? If yes, how are they beneficial to you?

APPENDIX E

Narrative paragraph writing post-test

Name_____ **Surname**_____**ID Number**_____

Instruction: Within one hour, write a paragraph of at least 150 words on the topic

below.

"My Most Embarrassing Experience "

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Descriptive paragraph writing post-test

Name_____ **Surname**_____**ID Number**_____

Instruction: Within one hour, write a paragraph of at least 150 words on the topic

below.

"My Favorite Restaurant"

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Comparison/contrast paragraph writing post-test

Name_____ **Surname**_____**ID Number**_____

Instruction: Within one hour, write a paragraph of at least 150 words on the topic

below.

"Learning English with a Thai Teacher vs. Learning English
with a Native Speaker"

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APPENDIX F

Questionnaire

Students' Perspectives on a Social Media Collaborative Discussion Model via Facebook (SMCD)

Name_____

Instructions: This questionnaire is divided into three major parts. Please answer the following questions honestly. Your answers will not affect your grades for the course of Writing Strategies in English (2102206).

Part one: **Perspectives on Online Collaborative Discussion (OCD)**

Please read each statement carefully and mark X in order to indicate the extent to which you agree or disagree with it.

Item	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
1	The OCD activities are simple and convenient for group discussions.					
2	Knowledge obtained from the OCD can be used to complete online tasks.					
3	The OCD encourages critical thinking skills and leads to knowledge construction.					
4	You prefer to have online collaborative discussion with group sizes of seven.					
5	You have fun and feel eager to share and exchange knowledge.					
6	At times, you feel you have got sufficient knowledge after the OCD activities.					

Item	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
7	Knowledge obtained from the online discussion can make you aware of errors in your writing and correct them by yourselves.					
8	The online sources prepared by the teacher are helpful for scaffolding learning and task completion.					
9	Overall, the OCD can help you enhance your writing proficiency especially in terms of grammatical knowledge.					

Part two: **Perspectives on Facebook used for the OCD process**

Please read each statement carefully and mark X in order to indicate the extent to

which you agree or disagree with it.

Item	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
1	Facebook is simple and convenient to use for the OCD.					
2	You enjoy communicating and working with peers on Facebook .					
3	Facebook Group is appropriate to be used as an online discussion board.					
4	You enjoy writing a diary and posting it on Facebook Notes.					
5	You have no difficulty to use Facebook Message in order to submit completed tasks to the teacher.					
6	You prefer discussing on Facebook to discussing in class.					
7	You sign in Facebook whenever you can to check out discussion boards.					

Item	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
8	You think Facebook is appropriate for teaching and learning English.					
9	You have already become a fan of Facebook.					
10	Overall, Facebook can serve your requirements in terms of online collaborative discussion and convenient communication with friends and teachers.					

Part 3: Perspectives on online tasks used in the OCD process

Please read each statement carefully and mark X in order to indicate the extent to which you agree or disagree with it.

Item	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
1	The instructions and objectives of online tasks are clear to follow.					
2	The designs of the task contents are useful to your writing enhancement in terms of grammatical structures.					
3	Each online task consisting of only one error category is appropriate for your language levels.					
4	Online Task 1 is suitable for your knowledge construction.					
5	Online Task 2 is suitable for your knowledge construction.					
6	Online Task 3 is suitable for your knowledge construction.					
7	Online Task 4 is suitable for your knowledge construction.					
8	Online Task 5 is suitable for your knowledge construction.					

Item	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
9	Online Task 6 is suitable for your knowledge construction.					
10	Online Task 7 is suitable for your knowledge construction.					
11	Online Task 8 is suitable for your knowledge construction.					
12	Online Task 9 is suitable for your knowledge construction.					
13	Online Task 10 is suitable for your knowledge construction.					
14	Online Task 11 is suitable for your knowledge construction.					
15	Online Task 12 is suitable for your knowledge construction.					
16	Online Task 13 is suitable for your knowledge construction.					
17	Online Task 14 is suitable for your knowledge construction.					
18	Online Task 15 is suitable for your knowledge construction.					
19	Online Task 16 is suitable for your knowledge construction.					
20	You had enough time to complete each online task.					
21	After completing online tasks, you have gained your own understanding and can revise your own paragraph.					
22	Online tasks are appropriate for online group discussions, and every group member felt free to discuss each weekly online task.					
23	Overall, provided online tasks helped you enhance your writing ability in terms of grammatical structures.					

Your good cooperation is appreciated.

APPENDIX G

Examples of students' discussions on Facebook

1. Discussion for knowledge verification

1.1 I think in Line 1 of the paragraph, the word *Big garden* was mentioned for the first time, so it should be written with an indefinite article as *My dream house is a small house with a big garden*. Am I correct?

1.2 The sentence '*First of all. Television has motion pictures while a newspaper has only printed words.'* is incorrect because *First of all* is not a complete sentence. I think it should be changed to *'First of all, television has motion pictures while a newspaper has only printed words.'* What do you think about this?

1.3 In Line 9, the sentence *'you can receive news more faster and more quickly than...'* is wrong, I guess. *Faster* is already a comparative form, so it does not need *more* here.

1.4 In Line 23, the sentence *' I bought some flowers from she.'* is wrong in terms of a personal pronoun. *She* should not be used as an object in this sentence. I think it should be changed to *her*.

1.5 In Line 12, the sentence *'At 7 o' clock, the bus leaved school and arrived at the park...'* was written with a wrong verb form. The past form of *leave* should be an irregular verb, so *left* should be used in this sentence.

2. Discussion for knowledge negotiation

2.1 I don't agree with Ploy's comment as she still made a mistake in terms of a verb form. She wrote *'we walken to the residents'*; however, I think *walken* should be changed to *walked*. What about the other members' ideas? Please share.

2.2 According to Sakunnee's contribution, she said *the* should be put in front of *everything*. I don't think it is correct as *everything* is an indefinite pronoun, and *the* cannot be used with it.

2.3 I think there is still a problem in Namsom's correction. Her suggested revision is *'I very much enjoyed eating them meself'*. From my understanding, there is not *meself* in English but *myself*.

2.4 I think Wantana's comment is not correct. She said it should be "*I have enjoyed the trip very much and feel so happy'*. In my opinion, past simple should be used in this sentence as this event already happened in 2003. So, I would write *'I enjoyed the trip very much and feel so happy'*.

2.5 I agree with Wimontip's discussion but not all. She corrected Wantana's comment quite well, but I need to say that she forgot to change *feel* in the sentence to *felt*. It then should be revised as *'I enjoyed the trip very much and <u>felt</u> so happy'*.

3. Discussion for knowledge acceptance

3.1 I do agree with Krongkran. She said *gooder* is an incorrect form of comparative degree, and the correct one is *better*. I would also revise the sentence as *'In my opinion, watching news on television is <u>better</u> that reading news from a paper'* like what she did.

3.2   I think what Sakunnee revised is correct. She said *most memorable and unforgettably trip* is wrong in terms of parallel structure as she changed from *unforgettably* to *unforgettable.*

3.3   According to Kung's revision, I think it is right as she rearranged the order of words from *kind extremely* to *extremely kind*. In my opinion, an adverb of degree can be used to modify an adjective and must be placed in front of it.

3.4   I think some of the comments on *'Mine lunch was noodles with crabs, spicy papaya salad,...'* are acceptable as all of them used *My* instead of *Mine*. I agree with them because in this sentence, a possessive adjective should be used to modify *lunch* rather than a possessive pronoun.

3.5   Regarding Namsorn's revision, she changed the verb forms in the sentence *'we waked up and ated breakfast at 7 o' clock'* to *'we woke up and ate breakfast at 7 o' clock'*. I do agree with this as she used the correct forms of past verbs.

4. Discussion for knowledge construction

4.1   Word choice is important. For example, in the sentence *'my mother did some sandwiches'*, it is wrong because we normally do not use *do/did* in this situation. So, it should be changed to *make/made*.

4.2   I am quite certain with my revision because *finished* must be followed by a gerund. So, I revised the sentence again as *'I finished swimming'*. Apart from finished, there are also some verbs followed by a gerund like practice, enjoy, etc.

4.3   I have learned some rules about parallel structure from the discussions, so I think this sentence *'On the way, the traffic was rather badly, busily and boring because...'* is wrong. I am quite sure that before and after conjunction *and* should be

adjectives not adverbs. I thus changed it to *'On the way, the traffic was rather bad, busy and boring because...'.*

4.4 I found that the appropriate use of commas and periods is also necessary to form a good sentence. The sentences *'I will be doing. By myself. In conclusion. I like reading news from a paper.'* are kind of broken. So, I would change to *'I will be doing by myself. In conclusion, I like reading news from a paper'.*

4.5 Of course, when narrating a story happening in the past, I should use past tense. Therefore, in the sentence *'My family decides to go to Phuket and Pangnga, the provinces in the south of Thailand.'*, I would like to revise it as *'My family decided to go to Phuket and Pangnga, the provinces in the south of Thailand'.* Here, I used *decided* as a verb form of simple past tense.
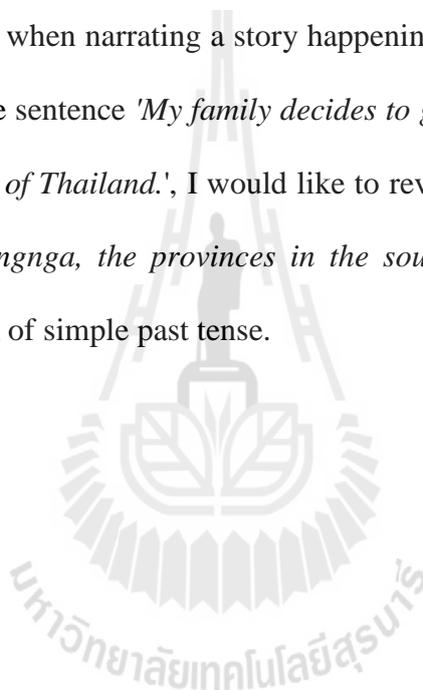
APPENDIX H

Data obtained from the semi-structured interview

Questions	Students' perspectives and opinions
Question1: Do you think online collaborative discussion via Facebook can assist you to enhance your English writing skills in terms of grammatical accuracy? If yes, how does it help you?	**S1:** Yes, but not much because some lessons were rather difficult to understand. However, I still believe it helps students improve their grammar and English writing. **S2:** It did help me about grammars; that is, each online task focused on one grammar point, which could help me when revising my paragraphs. **S3:** Yes, I really do. I could learn more about the things that I had not known before, and I had to try to develop my knowledge when discussing with my group members. **S4:** Yes, I do. Every online task was very helpful as I could review my knowledge and gain the new one. **S5:** Yes, I do. It helped me review my existing knowledge and gain the new one. Actually, there are many grammar points to learn, and if I do not brush them up, I will forget something for sure. **S6:** Yes because the contents in online tasks were related to what I needed to use in my writing revisions. **S7:** I could develop my grammatical knowledge a lot, especially in terms of sentence structure. I have realized that if we make mistakes, our writing will be problematic as its meaning may not be fully conveyed to readers.

Questions	Students' perspectives and opinions
	S8: Yes, I do. I have learned grammar since I was a child, but it seems like I do not study them continuously. Therefore, I am weak in some grammar points, and when I had to attend a writing class, I knew that I could not produce a perfect piece of writing. The online discussions on Facebook helped me review my grammar quite clearly. **S9:** Yes, it does help me. I had more opportunities to practice my grammatical knowledge and develop my English writing. **S10:** I think that it helped me review some grammar points that I had forgotten. I understand more about word choice, sentence structure, and tenses because of the online discussion activities. **S11:** I made use of the knowledge that I got from the online discussions in my writing revisions. Also, I learned new things and reviewed my previous knowledge at the same time during the activities. **S12:** Yes, I do. I reviewed my grammatical knowledge and used it in my writing revisions. It made my paragraphs more accurate. **S13:** It helped but just some. I could practice recognizing errors in writing, which enhanced my knowledge, and I could use that to improve my writing accuracy. **S14:** Yes because each online task, provided by the teacher, was related to the errors frequently made by Thai students, and it made me know more about grammar. **S15:** It helped me a lot in terms of the existing knowledge and the new one. I learned a lot during the online discussion activities.

Questions	Students' perspectives and opinions
Question 2: Between online discussion on Facebook and face-to-face discussion, which one do you prefer? Why?	**S1:** I still prefer discussion in classroom because I have more opportunities to talk to the teacher and friends directly. **S2:** I like both. I can discuss with friends face-to-face in class, but discussion on Facebook is more convenient as I can work with friends anywhere and anytime. **S3:** I prefer discussion on Facebook because it is more convenient. **S4:** I like discussion on Facebook because I do not have to work in class. However, I like both as they are different. Classroom discussion offers an opportunity to see facial expressions and gestures when discussing with friends, while online discussion does not have these. **S5:** I prefer discussion on Facebook because I have more time to work with friends, and I also have opportunities to consult the teacher anytime. Furthermore, I like typing discussions on Facebook as my handwriting is not good. **S6:** I like Facebook because it is convenient, and I can work at home. Also, I have more time to think of the answers and search for more knowledge in order to help discuss on each online task with group members. **S7:** I like working on Facebook. It is convenient in terms of time. Moreover, the things, which I do not know, but my friends know, can be shared on the discussion board. This helps me understand grammar more. **S8:** I think discussion on Facebook is better than discussion in classroom. I have enough time to think of the answers for group work.

Questions	Students' perspectives and opinions
	S9: I like both of them. Discussion on Facebook is like autonomous learning. I have to understand the handouts prepared by the teachers first and then I can share my knowledge with friends. Sometimes I make mistakes, but other group members can help me correct them, which makes me understand more. However, classroom discussion is also good as I can ask the teacher face-to-face. **S10:** I think Facebook is better because it is trendy. Discussion in classroom offers only 3 hours a week, which is not enough. On Facebook, I can talk to both my friends and the teacher and exchange ideas with group members. It encourages not only knowledge but also relationship with others. **S11:** I like Facebook is better because I am independent when working on Facebook. I have more opportunities to talk to friends and the teacher. **S12:** I like Facebook because it offers opportunities to communicate with others. So, discussion on Facebook is much better than discussion in classroom. **S13:** I like discussion on Facebook because I can work anywhere and anytime. Also, I have enough time to prepare my knowledge for the discussion. **S14:** Of course Facebook. It is flexible and convenient in terms of time as I have enough time to work and submit assignments. **S15:** I like classroom discussion because I like talking to friends and the teacher face-to-face. It makes me understand the lessons more.
Question 3: What are your attitudes towards online collaborative discussion via Facebook?	**S1:** Online learning is fine for me, but I think it is difficult for some students who don't like working in groups with other friends.

Questions	Students' perspectives and opinions
	S2: I have positive attitudes on Facebook because I can work with friends independently. **S3:** I have good attitudes on Facebook because it is convenient. **S4:** It is good. It helps me save time because I can talk to the teacher anytime for all the whole week, which is better than conventional classrooms. Discussion on Facebook helps me understand the lessons very well. Whenever I sign in Facebook, I can learn English with everyone. So, I think discussion on Facebook is very appropriate for me to improve writing. **S5:** I think it is a means for those who do not like doing homework like me because I like surfing the Internet, and whenever I sign in Facebook, I feel like I want to do homework more. **S6:** Facebook is considered as trendy because a large number of people are using it nowadays. It can be used for discussion, communication, and many more things. Also, I think the online discussion activities on Facebook are suitable as they do encourage students to practice writing. **S7:** It is convenient for work because our society nowadays is like an online society; that is, people can communicate with one another all the time no matter where they are. **S8:** In my opinion, Facebook offers me a wide range of educational opportunities. Discussion on Facebook helps me develop my grammar for my English writing. **S9:** Discussion on Facebook is very good as it helps me brush up my old knowledge. Actually, I am a Facebook fan. I always check Facebook out whenever available.

Questions	Students' perspectives and opinions
	S10: Everything done with Facebook is reasonable. The activities on Facebook made my parents aware of the advantages of social networks. They do not complain any more when I stay online.
	S11: In my points of views, most of my friends are using Facebook, so it is good to use Facebook as a means for teaching and learning activities.
	S12: Learning on the Internet offers me an opportunity to search for appropriate materials, which is perceived as quicker than learning in classrooms. However, the bad point of it is there are no teachers to explain and summarize important things.
	S13: Facebook is appropriate for me to exchange knowledge with friends in group.
	S14: I would like to tell you two good points of using Facebook for learning activities. The first one is its convenience in terms of time, and the second one is I am so independent when working on Facebook. Of course, I can submit assignments at home.
	S15: Facebook can be used to tell others my feelings or what I am doing now, so it is good to use Facebook for teaching and learning English as I can share what I know and what I want to know with my friends easily.
Question 4: Do you think online tasks provided on Facebook are suitable for your writing practice? If yes, how are they appropriate?	**S1:** Yes, it does help but again not much. I could get something from the activities and revise my paragraphs quite well, but If I don't practice my English writing continuously, I may forget some difficult points later. **S2:** The knowledge I gained from every online task can help me revise my paragraphs quite well.

Questions	Students' perspectives and opinions
	S3: They are appropriate for me to practice my writing because I can discuss with friends when I stay online. **S4:** Suitable. Each online task consisted of only one grammar point, so I didn't feel confused when working on it. **S5:** The online tasks are very appropriate. Because of them, I learned more about grammar and revised my paragraphs more effectively. **S6:** They are good for group discussion; furthermore, discussion on Facebook is also appropriate. I like online tasks provided on Facebook. **S7:** They are suitable for me to improve my grammatical knowledge. **S8:** I think they are very appropriate because I can learn grammar from them indirectly. I had fun when working on them with my group members. **S9:** Each online task helps me review each grammar point, which is useful for my writing revision. I think that they are so appropriate to be used on Facebook. **S10:** They are so good as each of them focuses on a particular problem; therefore, the knowledge gained from them can be genuinely used in my writing revision. **S11:** The online tasks are the lessons that help me review my knowledge and offer me something new. They do help me improve my writing accuracy. **S12:** They helped me learn how to recognize errors in writing, which I could apply to my revisions.

Questions	Students' perspectives and opinions
	S13: Yes, because I learned some grammars from the online tasks, and I could revise my paragraphs more effectively. **S14:** They are suitable because each of them includes only one grammar point, and I could learn to correct the mistakes step by step. **S15:** They are very appropriate because discussion on each online task is like brushing up the previous knowledge that I have. It helps me recall my knowledge, which I can use for my writing revisions.
Question 5: Is the knowledge gained from online collaborative discussion (OCD) useful to your writing revisions? If yes, how is it useful?	**S1:** Yes, it is. I could apply all the knowledge to my writing revisions even though sometimes I got confused with my sentences in the paragraphs. **S2:** The knowledge that I got from the discussions is very advantageous to my writing. I can identify errors in my writing and correct them somewhat effectively. **S3:** Yes, it does help me improve my writing. I understand some grammatical structures more and use them when writing and revising paragraphs. **S4:** It is so helpful as I can revise my work by myself. Also, I know where to correct because of the knowledge I gained from the online collaborative discussion activities. **S5:** It is advantageous to my writing revisions because I can recognize the errors and correct them quite well. **S6:** The contents in each online task is about grammars that I can use in my writing. Therefore, all the knowledge obtained from the activities can be applied to my writing revisions.

Questions	Students' perspectives and opinions
	S7: It can be used to revise my paragraphs in order to make them more comprehensible and more accurate in terms of meanings and structures. **S8:** It is useful to my revisions as I can be aware of such errors that I made and correct them. **S9:** It is so useful because as I just stated, every online task helps me review my grammatical knowledge and practice writing revisions. As a result, I understand the nature of linguistic structures more and finally I am quite confident with my writing in terms of accuracy. **S10:** Because of the OCD activities, some of my knowledge has returned, and I could make use of it when revising my own paragraphs. **S11:** It is useful to my writing revisions because the knowledge in online tasks helps me develop my writing skill regarding grammars. **S12:** After the online tasks, I could understand grammar more than ever, and I knew how to revise my paragraphs and correct all the errors by myself. **S13:** It is useful enough to writing revision because I have learned some new knowledge from the discussions such as fragment, run-on sentence, parallel structure, and so on. **S14:** Before I participated in the activities, I did not understand many grammar points, but after I finished all the online tasks, I found that I gained some knowledge that I could use for my writing revisions. I am now quite confident with my writing.

Questions	Students' perspectives and opinions
	S15: I think it is very helpful because the knowledge gained can assist me to improve my writing. I can recognize the errors made in my writing and correct them by myself.
Question 6: Overall, do you think online collaborative discussion on Facebook is advantageous for you to foster your grammatical knowledge and writing ability? If yes, how is it useful?	**S1:** Yes, but I still prefer working individually to working in groups. I think working in groups needs high responsibility, and my members were not quite responsible. However, after all the online activities, my grammars were improved pretty better. **S2:** I think it is useful, but I would still rather work individually because I am kind of a person who likes working on my own. **S3:** Yes, of course. After the activities, I could learn more, and I found that my writing now is much better in terms of grammar than ever. **S4:** Yes. I feel I understand some grammars more such as the use of articles, verb tenses, etc. The online collaborative discussion helps me a lot in terms of knowledge construction, and I can use that knowledge in my writing revisions. **S5:** I do like working on Facebook because I can do homework and do other stuff like listening to music, playing games at the same time. **S6:** Because of the activities, I gained new knowledge about fragment, run-on sentence, which I considered as the most problematic in English writing. I think, from now on, I can enhance my writing more. **S7:** I can review my previous knowledge and use it in my writing revisions. I am now quite more confident when writing an English paragraph.

Questions	Students' perspectives and opinions
	S8: I think the SM-OCD helps me a lot; that is, I could practice, exchange ideas with friends, and revise my own paragraphs. I feel more confident with my grammatical knowledge, and I am not worried when having to write a paragraph in English. **S9:** I gained more knowledge in terms of grammatical structures, and everything that I got can be used in my writing revisions. **S10:** I think it is so useful, and also I like working on Facebook as I can work anywhere and anytime with my friends. **S11:** I feel that my writing was developed considerably after the activities as I could revise my own paragraphs somewhat effectively. **S12:** What I like the most about this teaching method is Facebook, which is considered as popular and trendy. Furthermore, I think my writing has also been improved after receiving a series of exercises. **S13:** It is very advantageous as I could review my previous knowledge, finally leading to my writing enhancement. **S14:** Yes, all the knowledge obtained from the online tasks is so useful to my writing revisions and helps me understand grammars more than ever. **S15:** I believe my grammars as well as my writing ability are much better. Also, now I can detect errors in my writing and know how to correct them with more confidence.

APPENDIX I

Online tasks used in the SMCD Model

Online Task 1: Article

Instruction: There are some mistakes in the paragraphs below. Assist one another in your group to find and correct them.

Paragraph 1

My dream house is small house with the big garden. I don't want the big house because it is an extravagant. The small house is much nicer as it is easy for me to clean. More importantly, my house must include a furniture such as luxurious bed, the comfortable sofas, big television, video game, and so on. And the most important, around my house, there must be the big lawn and a lot of trees because they will make the weather nice. Finally, I do not want to have the air-conditioner in my house as the house is already full of a big trees. I think the everything in my house is not important; a most important thing is my family members living together happily.

Paragraph 2

All of people I love will stay in my house. My house must be large house located in big city. In garden, there must be a lot of pets and flowers. I also want to have waterfall behind a house, and swimming pool in front of house. It must be colorful inside with many colors such as purple for living room, orange for kitchen, red for dining room, blue for restrooms, yellow and pink for bedrooms, etc. There must be television, stereo, a computer, and big sofa in the living room. In addition, I would like car in my garage. I need to have only one because it is for me when going to work. Last but not least, I want to live with my family, including a father and a mother. It would be nice when everybody gives a love and a care, and has a happiness together in a house every moment and the every day.

Online Task 2: Verb tense

Instruction: There are some mistakes in the paragraph below. Assist one another in your group to find and correct them.

In 2003, I am ten years old. My family plans the trip in order to relax after we work hard for so long. When I was a primary student in Pratom four at " Anuban Lopburi School", I never travel by plane. That is the first time for me to travel by plane. My family decides to go to Phuket and Pangnga, the provinces in the south of Thailand. There are beautiful beaches there. We arrive in Phuket on 10 April 2003 at 10 A.M. by plane, my first impression. I feel so excited when the plane takes off, but I am still fine. At first, we go to "Similun". I collect many rocks on the beach. The rocks look like gems, which are very lovely. After that, we take a speedboat to "Talahwak", which has two small islands. I am very excited about that too. I ask my mother, "Why does it have two islands there?", and she explains to me clearly. On the first day, I feel so good about the trip. In the next morning, we go to "Tham Morrakot". We must swim into the cave in order to reach this place because it is surrounded by the sea. In the cave, it is very dark; however, the guide has a flashlight. It makes me feel ok. In that evening, we cook dinner for ourselves. It is such a great fun for my family. At night, we sleep in tents, and everybody gets to bed quite late. Around 1 A.M., a big rat comes into my tent to steal some snacks. I am so afraid of it. This trip is very impressive because I visit many beautiful places. I enjoy the trip very much and feel so happy.

Online Task 3: Word choice

Instruction: There are some mistakes in the paragraph below. Assist one another in your group to find and correct them.

My memorable trip was a trip to Phuket. At first, my family planned to go to Chaingmai, but it had to be called on because my grandmother wanted to go to the south of Thailand. Before we went there, my mother did some sandwiches so we could eat on the way when we felt starving. It got about 12 hours from Lopburi to Phuket. Unluckily, my father's car broke up on the way, which made everyone feel so irritating. I actually had to arrive there in time as I did an appointment with my close friend. My father paid about an hour to finish fixing it. I was so boring since the beginning of the trip, so I just thought how come I would enjoy it until the end. The atmosphere became cold; therefore, I did up my mind to put in a warm coat. Eventually, we arrived in Phuket at 6 in the evening. We went straight to a sea food restaurant to consume dinner. The food was delicious, but the charge of the meal was costly. According to my opinion, I thought the price was not that sensitive. In the next morning, I went to my friend's in Phuket. The others just relaxed on the beach near the hotel. The bus drove very slowly, which made me feel dizzy. I did want to throw away as I had a bus drunkness. The climate that day was also very damp. I was, therefore, very hot. I complained about this a lot to my friend. He just said, "Forget about it, and let's have fun today." We had lunch and then went swimming in the sea. I lied down on the beach, and my mood got much better. Then, we talked a lot about our childhood. Before I came back to the hotel, I helped my friend's mother make the chores. My friend brought me to the bus station and waited until I got in the bus. I got out of the bus at 7, which was dinner time. My family had dinner together at a Chinese restaurant. The food was terrific, so everybody could not eat it up and felt so disappointing. We lived in the hotel for only two nights. In the next morning, we left Phuket for Lopburi. This trip was not as good as I expected. However, it was nice because I could meet my close friend.

Online Task 4: Sentence structure

Instruction: There are some mistakes in the paragraph below. Assist one another in your group to find and correct them.

When I was young. My dream was " I want to go to Japan one day in my life". Because I like many things about Japan such as foods, songs, cultures, traditions, etc. I also like superstars Japanese very much. Last year, I was so surprised. Because my dream true came. My friends and I went to Japan because of we were selected to participate in the ESD program. Since it my first trip in Japan. We felt so excited. The weather was cold very. I was very scared about everything the first thing I had to do was to go to a Japanese class alone. So, I was so afraid. As I could not speak Japanese. However, it was such a nice time for me. Everybody was kind extremely to me and tried to speak me with English. I was so impressed. After school, I had to go my host family was Momoko. I called her Momo-Chan. Her family was very nice and lovely. Very much I loved them. On Bivoko mountain, I played the snow with my friends Japanses. And then in the afternoon, we went to the temple the first time I knew Yuka. She and I had the characteristics the same. We loved the same songs and movies. Although we knew each other for a short time. I liked very much her. When I had to go back to Thailand. This trip became like my dream long. I continue my school routines in Thailand as usual every day. I promise to myself. That I will never forget every moment in Japan. It is my best one of remembrances in my life. And now. I can speak a little Japanese. So, in the future, I will go to Japan again definitely.

Online Task 5: Singular/plural form

Instruction: There are some mistakes in the paragraph below. Assist one another in your group to find and correct them.

My memorable trip was amazing. Three year ago, I went to Japan for a rock concerts, and I decided to go there by myself. First of all, I went to the airport around 11.45 p.m. I waited in the passenger's area and then I walked to the airplanes at around 6 a.m. I arrived at Narita Airport in the evening. After that, I felt so hungry, so I walked to a coffee cafe to have somethings to eat and to wait for my friends named Sayaka. She was so cute. Then, I left the airport for a hotel in Tokyo. I felt so tired. When I arrived at the hotel, I slept for three hour. I woke up and then went to a restaurants nearby. I thought foods in Japan was so expensive, but it was so delicious. I bought two piece of Japanese pizza called Okonomiyaki. They were so tasty. Then I went to an electronics stores to look for some gadget. I was interested in Play Station 3 and a cell phones. After that, my friends and I went to Tokyo Dome to see the concert. There were so many peoples around the place, and I saw some teenager wearing costume. It was so amazing. The concerts began at 8 p.m. and lasted for two hour. In the concert, I saw a number of musician and singer on the stage. They were so awesome that I had to scream so loudly. After the concert, I went back to the hotel with my friends and got some rest. Though it was a tiring trips, I was very happy and this became my unforgettable remembrance.

Online Task 6: Preposition

Instruction: There are some mistakes in the paragraph below. Assist one another in your group to find and correct them.

If I have to talk with my travel, I will tell you about my journey on Thailand. I went at my grandfather's on the summer. It was located at a very peaceful province of Thailand, Phayao. I am about to start my story now. My friends and I left Lopburi to Phayao with car. In the way, we refilled petrol beside a gas station at Nakorn Sawan. Unfortunately, the car broke out before we arrived at Phayao, which made everybody feel so upset. Therefore, I called to my grandfather to pick my friends and me up and got the car repaired in a garage nearby. Finally, we reached to Phayao within difficulty on 1 P.M. at the afternoon. When we got to there, we visited at the Phayao lake immediately. I sat in my friends there and had lunch together in joy and happiness. My grandfather was very kind at everyone. It was such a happy time of ours. However, I had an unimpressive story to tell to you when I returned from Lopburi. As you know, we had to pass Nakornsawan in order to arrive at Lopburi. And, it was a New Year holiday, so the traffic was extremely bad. My friends and I got stuck in the road at a long time, which was very tiring and boring. I had to go to the gas station toilet in six times. When we reached to Lopburi, we felt so exhausted. It was such an evil returning travel because it took about 5 hours to Nakornsawas from Lopburi. Eventually, I could feel truly happy when I arrive in my house.

Online Task 7: Modal/auxiliary

Instruction: There are some mistakes in the paragraph below. Assist one another in your group to find and correct them.

I have a lot of memories about many occasional and special trips, but I am think a trip to a waterfall does the most memorable trip in my life. When I looking back and thinking about this trip, I will always happy. It very exciting when I heard my family talking about a trip to a beautiful waterfall. My brother and I very happy to hear that. We couldn't to wait for my mom to say, "You must to have some food and drinks because we going to have a picnic at the waterfall". Before we went there, I was buy some food at the supermarket such as cola, orange juice, chocolate, snacks because we would can enjoy the food during the trip. Also, I was not forget to buy some Papaya salad to be eat with roasted chicken and sticky rice. I very happy spending time with my family there. This trip made my heart so warm. My parents do very busy because they must to run their business every day. When I am spend time with them, I do feel happy. I forgot to tell you about the waterfall. It so beautiful and the water so clear and cool. The air and the scenery had beautiful. I believe everybody did love this trip and can not forget it. Last but not least, this trip the most memorable trip for me. However, it not enough as I always want to go there. In addition, I want to go to other places. The world is so big, and I would to love to see more things. I like traveling with my family very much.

Online Task 8: Verb form

Instruction: There are some mistakes in the paragraph below. Assist one another in your group to find and correct them.

Do you have a memorable trip? I am sure that you must have at least one because I also have my own memorable to share. My most memorable trip in my life is the trip that I goed camping with my friends at a park when I was in grade 10. That day was very cold. I gotted up at 5 o' clock to got on the bus at school. When I gone to school, I meted my friends and waitted for half an hour. At 7 o' clock, the bus leaved school and arriveed at the park at around 8 o' clock. The residents ared on the top of the mountain and the bus could not drove to, so we walken to the residents. When we arriveed there, we were so tired, but we haved to prepare ourselves for hiking in the forest. We startted hiking at 11 o' clock. We gotted into the forest and seed a lot of things such as plants, wild animals, etc. We finishen hiking and gone back to the residents at 2 o' clock in the afternoon. After that, we eated lunch and taked some rests. In the evening, we haved dinner and joinned some activities. I haved a lot of fun. At night, we layed down on the grass and looken at the stary sky. It was very beautiful. Then, we walkked back to our shelters at midnight. In the morning, we waked up and ated breakfast at 7 o' clock and then preparred ourselves to gos back to school. We reachen school at around 10 o' clock. This is my memorable trip and what about yours?

Online Task 9: Subject-verb agreement

Instruction: There are some mistakes in the paragraph below. Assist one another in your group to find and correct them.

Most people has no time to follow news. They often watches news on television because it is more convenient than reading news from a paper. But, reading news make you learns many kinds of news like sports, politics, entertainment, etc. Also, reading a paper make you remembers more things than listening to something on TV. I think watching news on TV are easy for us to forget things. A newspaper have several columns that you can choose to read. Not only news but also other knowledge are provided in a paper, which you can use in your daily life. Furthermore, you can practice analyzing news in a paper. Different newspapers offers different viewpoints of news. Moreover, if someone love to write, when he/she read, he/she can improve his/her writing as well. Sentences shown in a paper is used as a pattern or an example for writing. Most news in a paper are always true and up-to-date. A paper also provide you with particular knowledge such as gardening, healthy food, and so on. If you wants to get good news, just buy a newspaper, which are not expensive, and you will get an amount of knowledge that are extremely useful. Nowadays, the number of people are reading newspapers. My mother, together with her friends, like reading news from a paper, and sometimes they talks about news in their free time. I think reading news from a paper offer much more fun than watching news on television.

Online Task 10: Run-on sentence

Instruction: There are some mistakes in the paragraph below. Assist one another in your group to find and correct them.

My memorable trip it is a trip that I went to a trip to Korea with my parents. Firstly, I want tell that I am very interested in Korea in this country watch Korean series. A lot of Korean series they make me feel that how beautiful Korea this country is. Then, I want to go travel there in summer visit many places show on Korean series that I watched them. At the airport, my group went together had one group had twenty persons. Unfortunately, when I came reached the airport in Korea, my group had only 18 persons include the guide. My guide said the other nine persons lost this trip went have work in Korea because it was difficult for Thai persons to have VISAs, and they were just doing this way was easy to get VISAs. However, it was not my good trip I had just one memory that I could not forget it it was the man traveled in my group. He came with his sister and brother. He was studying educated at Chulalongkorn University which it was the most famous university in Thailand. For the first time, I met him talked with him thought that he was very handsome. He and I we traveled together it made me sure that he was very kind and friendly. He liked smile talked to me and everybody something like that. I think it made him be a perfect man. On the last day, we said goodbye had a farewell party exchanged things to one another as our good remembrances. Everybody we also exchanges e-mail addresses and numbers to one another each other. At the same time, I received his email and number. After that day, I talked chatted with him on MSN he is always a good man and I think he will be the one who I like him forever.

Online Task 11: Pronoun

Instruction: There are some mistakes in the paragraph below. Assist one another in your group to find and correct them.

I and me family went to the sea last weekend. The trip started at 6 P.M. from Lopburi. On the way me saw a lot of cars. It caused such traffic jam. I thought them were going to the sea too. I fell asleep all the way to the sea because they took such a time in order to get there. A plan for the next day was to have a surprise party for my mother because it would be hers birthday. After the party, our would go swimming then. Eventually, we arrived at 4 P.M. We dinner was Tom Yum Kung, steamed crabs, and pork omelet. After they finished our meal, I took a shower and went to bed. In the following morning, the weather was very hot. They just woke we up so early. Therefore, we planned to go to the sea for a swim. I saw a woman selling followers. I bought some flowers from she. Mine lunch was noodles with crabs, spicy papaya salad, roasted squids, and baked potatoes. I very much enjoyed eating they meself. After lunch, they lay down on the beach for a while and went swimming. It was fun. My mother sheself made fried rice that evening. We ate its happily because it was a delicious dinner for ourselves. I bought a birthday cake to surprise herself. I could see hers smiles with happiness. After dinner, me went to take a shower and went to bed because I would have to go back to Lopburi tomorrow to prepare me for my studies at Thepsatri Rajabhat University.

Online Task 12: Fragment

Instruction: There are some mistakes in the paragraph below. Assist one another in your group to find and correct them.

Watching news on television and reading news from a paper aim at presenting news. I think. They are different in some ways. First of all. Television has motion pictures while a newspaper has only words. That make someone who hates reading feel bored. Secondly. Television has voices that help those. Who cannot see receive news easily. On the other hand. A newspaper is not for the blind. As you can see. Blind people cannot consume daily news from a paper. As well as the one who cannot read. Thirdly. Because television has such pictures and sounds. People can understand news more easily. Than receiving news from a paper. In the morning, in the afternoon, and in the evening. People can watch news on television. Updated all the time. While news from a paper is updated only one time a day. Fourthly. Television presents both short and long news. That seems to be easy to comprehend. In terms of news from a paper. It includes only long passages. Which make readers confused. At all times. A paper is comprised of unimportant news. Last but not least. During watching television. I can do other things. At the same time when watching news. In contrast. While reading a paper. I cannot do other things. In my private opinion. I prefer a newspaper to television. Because I like reading. Every time I read. I always understand everything by myself. I like to imagine. When reading news or stories. I like to guess. What's going on or will happen next. I do not like watching television. Because of its brightness. I always feel dizzy. When watching it. I always have a headache. And, I prefer still pictures in a paper to such motion pictures. As mentioned before. I like to imagine what the characters in the pictures will be doing. By myself. In conclusion. I like reading news from a paper. Much more than watching news on television.

Online Task 13: Infinitive/gerund

Instruction: There are some mistakes in the paragraph below. Assist one another in your group to find and correct them.

I am both familiar with to watch news on television and to read news from a paper. Still, I prefer to watching news on television. Since I was young, I tried reading a newspaper and I found out that it was too big and smelled pretty bad. Moreover, the pages always dropped out of my hands every time I turned them. In the end, I could not finish to read it. That is why a newspaper, in my opinion, is considered an embarrassing paper. I often try reading newspapers, but most of the topics are political news, and it is absolutely boring. I have never read political news more than ten lines, but I do love to read a separated small issue, which is inserted inside newspapers. Of course, it is not about politics, but health, invention, crafts, new discoveries, unseen pictures, and famous people's interviews. I think my favorite kind of newspapers is smaller ones without to show political news. To watching news on TV is much faster with audios, images, and motion pictures. You can immediately receiving news whenever it occurs and sometimes with a live report in that particular area. I like to watch phone-in interviews. I feel that it is genuine. To watching political news on TV is more interesting. But if it is on a paper, it always turns boring. As you can seeing, there are loads of morning news programs on TV that using newspapers to tell you news. Sometimes it cannot be avoided to use a newspaper. I do not knowing how it comes, but it does make things up. Also, it makes all the news on a paper becoming more colorful and lively.

Online Task 14: Transition

Instruction: There are some mistakes in the paragraph below. Assist one another in your group to find and correct them.

Watching news on television is better than reading news from a paper. Although I do not like news, but I still prefer news on television. I think watching news on television is fun; however, I feel good whenever I watch television rather than read a newspaper, so when I read a paper for a long time, I feel so bored but dizzy because of the words in a newspaper are very small. Also, I think sometimes reading news from a paper makes me love reading. A journalist normally writings with a formal language, because I can learn how to use the correct written language from a newspaper. In addition, watching on television is very easy, yet I enjoy every time when I watch my favorite programs. I cannot only see the real events and also see the colorful pictures on television. Consequently, many news reporters are beautiful women and then smart men. Alike Mr. Sorayut, he is one of the most popular news reporters in Thailand, for he is good at using the Thai language. My mother always watches news on television. Either my mother nor my father teaches me every day about the daily news; hence, both of them want me to be a good boy. Even although she does not like criminal news, she still watches it in order to teach me not to do like that. My family likes to debate about news in the evening. I think that those who do not like news will be stupid due to they cannot catch up with the recent situations, or they will be out of date eventually. In the evenings, I like to relax by watching sport news. Yet, I like watching football matches and the interviews of famous football players. And, my mom likes to watch entertainment news, while my grandmother likes news regarding the royal family. Neither I or my father likes political news as my father always watches economic news. Although everybody in my family likes different news, yet we can talk to one another about every type of news. However, all the news is good, so the news can teach you as it is considered your everyday teacher. Otherwise, you can learn daily lessons from the news. For example, religious news can teach you to be a good person; therefore, economic news teaches you how to run your own business. Least but not last, no matter what news you watch, it makes you become smart and up to date.

Online Task 15: Parallel structure

Instruction: There are some mistakes in the paragraph below. Assist one another in your group to find and correct them.

A trip to Khaoyai was my most memorable and unforgettably trip that I will remember forever. As I am a person who likes hiking, traveling, to go sightseeing and to camp, I always go to many natural places with my family and my friends. When I was on my school holiday, everybody in my class decided to go to Khaoyai for three days. It was an incredibly, enjoyable and adventurously trip, in my opinion. In the morning, we waited for the bus and gather in front of the school. The bus came at around 7 o' clock. My friends and I got on the bus, settle down at our seats, and preparing ourselves for a long journey as it took about 3-4 hours to get there. On the way, the traffic was rather badly, busily and boring because it was weekends, and many people liked to travel, hiking, and having a picnic at Khaoyai Resort. Eventually, we arrived in Khaoyai. When arriving there, I realized that I had forgotten my wallet at home and leave some of my clothes in my father's car. It was such a bad habit of mine that I was always forgetful, clumsily, and carelessly. However, I borrowed some money from my friends and buy some cheap clothes there. It was much cheaper to buy clothes from a shop than buying some from the superstore. In the afternoon, we went shopping for some food. Most of my friends liked eating papaya salad and to drink soft drinks, so we not only bought some som tum, grilled chicken, and sticky rice but also provide some coke and juice. After lunch, we went to hike in the forest in order to see the beautiful and colorfully nature. We spent about 3 hours in the forest until almost 5 p.m. In the evening, we had dinner, sing songs, telling ghost stories, and playing games together until almost midnight. Then, we went to sleep in tents. In the next morning, everyone got up very early in order to see the sun rise. I thought the sun that morning was beauty, gorgeously and pretty, which was not the sun rise I saw in the city. Breakfast was rice soup, bread, fruit juice and iced. In the night that day after dinner, we went to see night animals by pickup truck. It was so exciting and thrillingly to see animals walking and wander around by a big flashlight. On the last day, before we returned home. On the way, we dropped by a souvenir shop to buy some souvenirs for our family members and had lunch there. This trip was fun, and I believe everyone who went together was happy, delighted, and joyfully as well.

Online Task 16: Comparison structure

Instruction: There are some mistakes in the paragraphs below. Assist one another in your group to find and correct them.

Paragraph 1

In my opinion, watching news on television is gooder than reading news from a paper in many ways. First of all, news on television is much interestinger because of sounds and motion pictures. In addition, some reporters are funnier as they always read news in a funny way in order to make frightening news become more little scary. Some news such as political, and economic news is much more boringer than other types of news. Therefore, it is narrated with more clearer explanations by reporters. Secondly, news on television tends to be updated at all times. That is, you can receive fresh news more faster and more quicker than news from a paper because normally you get a paper only once a day. Furthermore, live news report is the directest means to broadcast the most fresh news to audiences at home, for example, a more incredible accident, a more emergency case, etc. Sometimes the baddest news is also reported immediately on television. As just mentioned, news from television can be considered more quick and fresher than news from a paper. Last but not least, news on television looks more real than news on a paper as we can see realer places on television. When you read a paper, you have to read only letters or alphabets without pictures, which makes you use your own imagination.

Paragraph 2

My dream house must be a smaller house with a tinier yard behind it. Also, it does not have to be as more expensive as a Mercedes Benz, but it must be the house full of love and care. Inside the house, there should be two bedrooms, one living room, and only one bathroom as my family includes only three persons- father, mother, and me. As you can see, my family is not so bigger as other families. Therefore, I think to live in a smallest house makes me feel warmer and more secured. The more small a family is, the more tiny a house should be, I think. Moreover, my house should be more close to the nature. I do not like living in a big city as it is more noisy, more dirty, and more polluted than a county. Additionally, people in the county are generouser, more nice, and more friendly than those living in a big city. If I could live in this kind of house, I would feel so happier.

APPENDIX J

Examples of students' pre- and post-tests in three genres

Pre-test (Narrative writing)

"My Memorable Trip"

In the winter last year, I went to Chiang Mai and Chiang Rai with my friends. It is an impressive trip so much. First day my friends and I left Lopburi early morning by bus. I saw view on the way side but someone sleep. In late morning the bus run on the route 32 or Asia Road in Nakornsawan Province. Around mid day stop at Lampang for lunch and visited Wat Phra That Lampang Luang Temple. In late afternoon arrived Chiang Mai and go up to the Doi Suthep. It is a grand mountain of Chiang Mai and in evening check in the hotel. On day 2, my friends and I went to Doi Ang Khang. This place is beautiful and located in Fang District. Touch many beautiful flowers and good weather on the mountain. In afternoon, we went to Chiang Rai and arrived there around evening, check in the hotel in Mae Fah Luang University. And go to the might bazar. On day 3, in early morning, left the town to Wat Rong Khun. It is a white temple and located far from the town. After that back to Lopburi, while the bus was running, I sightsee on the way side and arrived home around 10 p.m. It is an impressive and enjoy trip with my friends and it's a good memory.

Pre-test (Description)

"My Ideal House"

House is the best shelter. In the future, I wanted to have a good house and I wanted to design with myself. I wanted a house resort-style located on my land. I wanted to have a swimming pool and hot springs. I planted jasmine and rose, yellow, red, white and pink in front of the house. And there are big trees around the house. There is a wide lawn. There is a small fish pond and the size of a modest house with a modern mix of retro-style. The house has two layers consisted of one living room with retro-style mix modern, four bedrooms, two bathrooms are upstairs and downstairs, one kitchen and one entertainment room. I have to a garden and a swing set in the garden. The simulated bench is behind the house. I want to have a medium size car and fence strength. I want my family to be happy and love this house. And I want to have activity in the family together. In the future, if I have a house, I wanted all this stuff in my house. It would make me very happy.

Pre-test (Comparison/contrast)

"Watching News on Television vs. Reading News from a Paper"

We can do this two ways to get the news with watching on television and reading newspapers. To view the latest news from the television, we know the speed and ease of viewing. There are many types of news programs on television. You can choose to view on demand. There are news reports daily like sport news. In addition, to news, there are various entertainment programs and documentaries that can be viewed at any age. Read the newspaper as an alternative to one of the people who do not have time to watch television news. Especially, those who work out outside the house or who have irregular work schedules. Reading a newspaper, sometimes we cannot know the news happening in the immediate situation. Sometimes news is just fine. This is why I read the news reader is to understand the meaning of material fact. So the television is more effective than reading a newspaper from the ceiting texture. You will receive a full cup of pleasure in watching it with audio and video animation and realism.

Post-test (Narration)

"My Most Embarrassing Experience"

My most embarrassing experience happened when I studied at high school. My best friend and I went to a tutoring school for studying English at Siam. My friend was a girl who was tall. When the class finished, we went down and I held her hand (I pulled her hand) and said that shall we go home? But, I felt something and looked at my friend, but I saw that my friend just still stood confused in the queue at the exit. I thought whose hand I was holding and the boy who was held his hand was also confused. Finally, I found that I was holding a boy's hand and felt that why the hand was so big. Then I bent down my head and walked away. The reason was on that day my friend wore a white shirt and long pants and a bag same as that boy. When I stood by her, she was tall over my shoulders. So, I did not looked up. When I got out of the door, I laughed and felt embarrassed. I hope that he could not remember me.

Post-test (Description)

"My Favorite Restaurant"

There are two restaurants that I like. The first restaurant is Papee Restaurant. It is a Thai restaurant, serves Thai food. It is a big and peaceful restaurant located on Nikom-Khok Toom Road in Lopburi. The restaurant is cowboy style with many trees and opened around late afternoon to midnight. Every new year and Songkran, my family goes there for dinner. There are many different delicious foods, especially Tom Yum, Pad Kai Med Mamuang, and Pla Sam Rod. But the most famous and popular dish is Papee's chicken. And the food is not expensive. The second restaurant is Sukanya Restaurant. It is a small and comfortable restaurant, serves Thai and European food. It is located near Sa Kaeo roundabout in Lopburi. I always come here with my friends. The food is good also juice, milk, tea and coffee. Most people come to the restaurant for lunch and dinner. Someone comes to drink coffee in the afternoon. Most food I liked such as steak, fried rice, and Tom Yum. The food of the restaurant is expensive I think, but some is not expensive, most famous of Sukanya restaurant is coffee.

Post-test (Comparison/contrast)

"Learning English with a Thai Teacher vs. Learning English with a Native Speaker"

I think it really depends. But for me, I think learning English with a Thai teacher is the best because we are speaking the same language. In the time of problems, we can discuss with the teacher anytime. I have memory about a bad foreign teacher. The teacher was impolite and inappropriate. In the evening, she always drank alcohol in the public place and hang out every night. She did it every day and she was unable to teach. Although I attended classes every time, she graded me E without any evidence. This discouraged students and made us think that foreign teachers can't be trusted. However, there are a lot of good foreign teachers out there. In fact, no one ever wanted to retake courses. Therefore, I think learning English with a Thai teacher is the best. At least, we can know our marks no matter pass or fail. And I think Thai teachers are as skilled at speaking/writing English as native speakers. Although their accent is not 100% correct, their knowledge and ability is not little.

APPENDIX K

List of Experts

Name	Position	Instrument Examined
1. Asst. Prof. Dr. Siriluck Usaha	- Director of Language Institute & International Relations, Sripatum University, Cholburi Campus	- Writing Topics Used for Pre- and Post-Tests - Online Tasks for the Somchai SMCD Model - Questions for Semi-structured Interview
2. Asst. Prof. Dr. Kornthip Watcharapunyawong Techametheekul	- Head of Textile Science Department, Faculty of Agriculture, Kasetsart University, Bangkok - An Expert in Technopreneurship and Innovation Management	- Needs Analysis Questionnaires - Perspective Questionnaire - Model Component Assessment Questionnaire - The Somchai SMCD Model - Questions for Semi-structured Interview
3. Asst. Prof. Dr. Rachada Pongprairat	- Head of English of Arts Department, Faculty of Humanities and Social Sciences, Thepsatri Rajabhat University, Lopburi - A Lecturer, Faculty of Humanities and Social Sciences, Thepsatri Rajabhat University, Lopburi	- Writing Topics Used for Pre- and Post-Tests - Inter-rater Reliability of Pre- and Post-Tests - Needs Analysis Questionnaires - Perspective Questionnaire

Name	Position	Instrument Examined
		- Model Component Assessment Questionnaire - The Somchai SMCD Model - Online Tasks for the Somchai SMCD Model
4. Asst. Prof. Wanida Wiromrat	- A Lecturer, Faculty of Humanities and Social Sciences, Thepsatri Rajabhat University, Lopburi	- Inter-rater Reliability of Pre- and Post-Tests - Writing Topics Used for Pre- and Post-Tests - Needs Analysis Questionnaires - Perspective Questionnaire - Online Tasks for the Somchai SMCD Model
5. Dr. Kriangkrai Yaikhong	- Head of English of Education Department, Faculty of Humanities and Social Sciences, Thepsatri Rajabhat University, Lopburi - A Lecturer, Faculty of Humanities and Social Sciences, Thepsatri Rajabhat University, Lopburi	- Model Component Assessment Questionnaire - The Somchai SMCD Model - Questions for Semi-structured Interview

CURRICULUM VITAE

Mr.Somchai Watcharapunyawong was born on June 15, 1979 in Nakornsawan Province, Thailand. He received his Bachelor of Education in English (First Class Honors) from Thepsatri Rajabhat University, Thailand in 2003, and a Master of Arts in English from Srinakharinwirot University, Thailand in 2007. He was granted a full government scholarship for his doctoral study at Suranaree University of Technology by Office of the Higher Education Commission, Thailand. While he was a PhD candidate, he had an opportunity to study at the University of Queensland, Australia, and obtained a certificate in TESOL in 2012. His research interests include L2 writing, technology-enhanced language learning, and autonomous learning.