THE DEVELOPMENT OF A FORM-FOCUSED WEB-BASED INSTRUCTION TO

ENHANCE THE ENGLISH GRAMMATICAL AND WRITING COMPETENCE OF

THAI UNDERGRADUATE SPORTS SCIENCE STUDENTS

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A Dissertation Submitted in Partial Fulfillment of the Requirements

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การพัฒนารายวิชาการเรียนการสอนบนเว็บโดยเน้นไวยากรณ์ในบริบทเพื่อส่งเสริมความสามารถ
ทางด้านไวยากรณ์และการเขียนภาษาอังกฤษของนักศึกษาไทย
ระดับปริญญาบัณฑิตสาขาวิทยาศาสตร์การกีฬา

นางสาวธนาวรรณ สุทธิวาทนฤพุฒิ

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ธนาวรรณ สุทธิวาทนฤพุฒิ: การพัฒนารายวิชาการเรียนการสอนบนเว็บโดยเน้นไวยากรณ์ ในบริบทเพื่อส่งเสริมความสามารถทางด้านไวยากรณ์และการเขียนภาษาอังกฤษของ นักศึกษาไทยระดับปริญญาบัณฑิตสาขาวิทยาศาสตร์การกีฬา. (THE DEVELOPMENT OF A FORM-FOCUSED WEB-BASED INSTRUCTION TO ENHANCE THE ENGLISH GRAMMATICAL AND WRITING COMPETENCE OF THAI UNDERGRADUATE SPORTS SCIENCE STUDENTS) อ. ที่ปรึกษาวิทยานิพนธ์หลัก: รศ. ดร. ปัญชลี วาสนสม สิทธิ์, 341 หน้า.

งานวิจัยนี้จัดทำขึ้นโดยมีวัตถุประสงค์ 4 ประการ (1) เพื่อสำรวจความต้องการของนักศึกษา ไทยระดับปริญญาบัณฑิตสาขาวิทยาศาสตร์การกีฬาและผู้เกี่ยวข้องเพื่อเพิ่มพูนความสามารถ ทางด้านไวยากรณ์และการเขียนภาษาอังกฤษของนักศึกษา (2) เพื่อพัฒนารายวิชาการเรียนการสอน บนเว็บโดยเน้นไวยากรณ์ในบริบท (3) เพื่อหาผลสัมฤทธิ์ของรายวิชาที่มีต่อความสามารถทางด้าน ไวยากรณ์และการเขียนภาษาอังกฤษของนักศึกษา และ (4) เพื่อสำรวจทัศนคติของนักศึกษาที่มีต่อ รายวิชา

งานวิจัยนี้เป็นงานวิจัยเชิงสำรวจและเชิงทดลองซึ่งประกอบด้วย 3 ขั้นตอนหลักอันได้แก่ การสำรวจความต้องการของนักศึกษาวิทยาศาสตร์การกีฬาและผู้เกี่ยวข้อง การพัฒนารายวิชาการ เรียนการสอนบนเว็บ และการประเมินผลสัมฤทธิ์ของรายวิชา บทเรียนดังกล่าวได้นำมาใช้สอน นักศึกษาวิทยาศาสตร์การกีฬาจำนวน 83 คน ณ มหาวิทยาลัยมหิดล ประจำปีการศึกษา2554 ระหว่างศึกษา นักศึกษาต้องฝึกทำแบบฝึกหัดไวยากรณ์บนเว็บไซด์ที่จัดให้และฝึกเขียนภาษาอังกฤษ ในเว็บบล็อก ทั้งนี้นักศึกษาสามารถปรึกษากับอาจารย์ผู้สอนและเพื่อนเกี่ยวกับการใช้ไวยากรณ์และ การเขียนได้ทางเฟสบุ๊ค จากผลคะแนนที่ได้จากการทดสอบก่อนและหลังเรียน รวมถึงคะแนนที่ได้ จากการทำแบบฝึกหัดและการเขียนในเว็บบล็อกเพิ่มขึ้นอย่างมีนัยสำคัญ ทั้งนี้ยังพบอีกด้วยว่า นักศึกษาที่เข้าร่วมโครงการมีทัศนคติในเชิงบวกต่อการเรียนการสอนบนเว็บ จากผลการศึกษาสรุป ได้ว่าการสอนบนเว็บโดยเน้นไวยากรณ์ในบริบทช่วยให้ผู้เรียนสามารถพัฒนาความสามารถในการ ใช้ไวยากรณ์และการเขียนภาษาอังกฤษได้ ดังนั้นจึงควรมีการพัฒนาการสอนบนเว็บโดยเน้น ไวยากรณ์ในบริบทเพื่อนักศึกษาวิทยาศาสตร์การกีฬาต่อไป

สาขาวิชา ___ภาษาอังกฤษเป็นภาษานานาชาติ___ ลายมือชื่อนิสิต_____

ปีการศึกษา _2555_____ ลายมือชื่อ อ.ที่ปรึกษาวิทยานิพนธ์หลัก_____

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KEYWORDS: WEB-BASED INSTRUCTION/ FORM-FOCUSED INSTRUCTION/ WEB-BASED COURSE FOR SPORTS SCIENCE STUDENTS/ GRAMMATICAL COMPETENCE/ WRITING COMPETENCE

THANAWAN SUTHIWARTNARUEPUT: THE DEVELOPMENT OF A FORM-FOCUSED WEB-BASED INSTRUCTION TO ENHANCE THE ENGLISH GRAMMATICAL AND WRITING COMPETENCE OF THAI UNDERGRADUATE SPORTS SCIENCE STUDENTS. ADVISOR: ASSOC. PROF. PUNCHALEE WASANASOMSITHI, Ph.D., 341 pp.

The study objectives were (1) to investigate the needs of Thai undergraduate sports science students and their stakeholders to enhance the students' English grammatical competence and writing ability, (2) to develop the form-focused web-based instruction, (3) to find out the effects of the form-focused web-based instruction on the sports science students' English grammatical competence and writing ability, and (4) to investigate the attitudes of sports science students toward the instruction.

The study was descriptive and experimental research including three phases: needs analysis, course design, and evaluation of the effectiveness of the form-focused web-based instruction. The study was conducted with 83 undergraduate sports science students at Mahidol University in the 2011 academic year. During the experiment, students were assigned to do grammatical exercises on the web-based course, practice writing on the weblog, and discuss on Facebook regarding their problems in grammar and writing. Based on the gain scores of the pre-test and post-test, grammatical exercises, and writing assignments, the students had improvement in grammatical competence and writing ability. There were statistically significant differences of the mean scores of the pre-test and post-test ($t = 6.07$, $p = .000$), weblog writing assignments ($F = 10.355$, $p = .000$), and grammatical exercises: cloze tests ($F = 33.142$, $p = .000$) and the error recognition tests ($F = 52.66$, $p = .000$). The students also had positive attitudes toward the instruction. Therefore, such instruction was worth developing for and implementing with sports science students.

Field of Study : ‗‗English as an International Language‗Student's Signature‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗

Academic Year :‗‗2012‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗Advisor's Signature‗‗‗‗‗‗‗‗‗‗‗‗‗‗‗

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CHAPTER I

INTRODUCTION

1.1 Background of the Study

The popularity of the Internet use is increasing rapidly as evidenced by the number of Internet users worldwide which reached 1,574,313,184 in 2009 (Internet World Stats, 2009). On cyberspace, additionally, the English language is the most-used language for communication of 452 million users (Internet World Stats, 2009). Such a number raises the interest of researchers that the Internet can be used as a unique learning channel for English language learners to practice the language with various users worldwide (Yang and Chen, 2008).

In ESL and EFL, over the past decade, the use of Internet in teaching and learning a language has been dramatically increasing because this technology has advantages over other learning materials (Chen, Belkada, and Okamot, 2004; Eskenazi, 1999; Nelson and Oliver, 1999; O'Dowd, 2003; Pennington, 1996; Toyoda and Harrison, 2002; Warner, 2004). The Internet offers students 24 hours a day to practice the English language (Warschauer, Shetzer, and Meloni, 2000). It can serve as a platform for communicative exchanges between students and native speakers as well as between different groups of students in different regional areas (Vogel, 2001). Information on the Internet has entered L2 classrooms faster than other forms of communication technologies like televisions, videoconferencing, etc. (Coiro, 2005; Leu, 2002). Apart from this, the Internet has expanded the abilities of students from traditional learning styles in the classrooms to abilities to learn, comprehend, and interact with technology in a more meaningful way (Pianfetti, 2001). Students can search current issues on the Internet, send emails to their teachers or peers, chat on Facebook, and so forth. Since the Internet has many benefits in teaching and learning, there are many courses on cyberspace developed in the form of the web-based instruction (WBI) provided as learning resources which are cheaper than telephones, videos, satellite connections, or printed materials (Eklund, Garrett, Ryan, and Harvey, 1996). There are many examples of language-specific web-based CBMs (computer-based materials), including those provided by major English Language Teaching (ELT) publishers, such as Cambridge University Press (http://www.cambridge.org)

and more specialist providers, such as Clarity Software (http://www.clarity.com.hk/) (Figura and Jarvis, 2007). There are also free of charge language-specific online websites offered for ESL and EFL students to access and do activities on the websites, such as (http://a4esl.org/) for general English and (http://www.uefap.com/) for English for academic purposes.

Referring to the theories of language learning, the principles of web-based instruction can be related to a wide range of theories. Social Constructivism, especially, is a prevalent theory that is mostly related to online learning (Bonk and Wisher, 2000). The main concern of the theory is the construction of knowledge through social interaction and collaboration with others as well as the interpretation of experience and previous knowledge (Bonk and Wisher, 2000; Brunner, 1960; Vygotsky, 1978). Proponents of the theory believe in the "zone of proximal development" which is a bridge between actual stage of development and potential stage of development (Vygotsky, 1990). In the classroom where the Social Constructivism theory is employed, learning process highlights "collective-learning" where teachers and more knowledgeable peers have the role in helping students construct new knowledge (Tinio, 2002). The role of teachers and more knowledgeable peers shifts from being a linear model to being a facilitator or a moderator to help students move from their actual stage of development (the position where they can master the task by themselves) to their potential stage of development (the position where they construct new knowledge after having some negotiation, collaboration, and assistance from more knowledgeable people). With some collaboration and sharing processes in the Zone of Proximal Development, students will be able to construct new knowledge, thus getting apprenticed into "communities of practice" which include certain beliefs and behaviors (Dougiamas, 2000; Lave and Wenger, 1991).

When asked about the communities of practice, on the Web there is an exchange of information that occurs directly through a semiotic medium, such as language and other signs, or indirectly through network tools, like websites, weblogs, Facebook, etc. (LeFoe, 1998). Facebook is a Web 2.0 technology which emphasizes the building of communities of practice and gives choices for students to use social networking sites in creative and useful ways. It plays the role as a more knowledgeable other allowing students to learn new knowledge about the target

language if they use the language as a tool for browsing profiles, meeting new people, and exploring relationships (EDUCAUSE, 2006). In Thailand, it was found that the number of Facebook users reached 5,143,240 in September 2010 (Wongreanthong, 2010). This ranked Thailand the 21st in world rankings of the number of Facebook users (Wongreanthong, 2010). With this number, it was found that users between the ages of 18 and 24 constituted the largest groups of Facebook users, accounting for 37% of the total number. Because this age group is the ages of students who study in the university level, Facebook is included in this study as one of the social networking tools used potentially to enhance the students' grammatical competence and writing abilities.

Another Web 2.0 technology used together with the web-based course in this study is weblog. Weblog provides a free online space for students to practice writing (Eastment, 2005). Referring to the perspectives of the Social Constructivism theory, weblog gives students a great opportunity to contact and work collaboratively with their teachers and their peers. They can write on a weblog and get some useful comments and suggestions from more knowledgeable people to improve their grammatical competence and writing abilities. Apart from this, teachers can use a weblog as a means to teach both grammatical and writing skills (Ward, 2004). They can assign students to exchange their writings via blog pages. During this process, they can access the drafts and give comments to their students' writing assignments at their convenience.

Concerning the benefits of web-based instruction toward language teaching and learning, in Thailand, Internet technology is becoming a part of the society and being applied widely for use in education, in addition to uses in various services and by users from all subject domains. Because of its non-stop services, the number of people using the Internet is dramatically increasing in the country. The most recent statistics shows that the number of Internet users in Thailand reached 18,300,000 in 2009 (NECTEC, 2009).

The Education Act in Thailand 2002/2003 (2003: 84) states that various technologies in education play an important role in enhancing the competitiveness of Thailand and Thai people in a knowledge-based economy and society. Highlighting this importance, Chapter Nine of the National Education Act B.E. 2542 (1999) is

devoted to technology for education (The Ministry of Education, 1999). In this chapter, it is stated that the government will establish the Technology for Education Development Fund and a central unit that has authority over proposing policies, plans, promotion, and coordination of research as well as development and use of technologies in education.

Responding to the popularity of the Internet technology, at Mahidol University, web-based courses were developed in the form of MOODLE courses where students could access and do activities as part of their participation marks in the English Course Level 1. The web was designed to help students improve and gain greater academic achievement in the English language based on the criteria of the English Course Level 1 which first-year students were required to study. The course mainly focused on the use of grammatical knowledge in the context of daily life language, whereby the four language skills of speaking, listening, reading, and writing were integrated. However, based on my teaching experience, it was found that some groups of students, particularly sports science students, still had problems learning English in the course. A large majority of the students in this group usually had the lowest English language competence and experienced the most difficulty in writing when being compared with students from other faculties. Based on the data of the 2009 academic year, for example, it was found that this group of students had the average score of 24.37% in the writing part which was less than the average score of 28.39% of the whole student population from other faculties at a significant level ($p < .05$).

It was found that most of the students' problems in writing came from the reasons that they could not write sentences correctly. For instance, they could not choose suitable connectives, transitive verbs, conjunctions, relative pronouns, or some other grammatical units to form sentences in a paragraph. Since most of the students in this group had problems in using grammatical words to form sentences, it is necessary for them to develop grammatical competence in order to enhance their writing abilities.

According to the Common European Framework (1996), grammatical competence is part of a linguistic competence. It is the knowledge of grammatical structures and the ability to use them to produce and express the meaning in communication of the target language. In language learning, Haussamen, Benjamin,

Kolln, and Wheeler (2003) point out that most of non-native English students need to learn the meaning of a language associated with its grammatical structures. This is because if students lack knowledge of English grammar, they may convey their thought in a wrong way and miscommunication can result. Moreover, grammar also makes students understand the conventions of Standard English in terms of how sentences work together to create a meaningful text (Haussamen, Benjamin, Kolln, and Wheeler, 2003).

Concerning the necessity of grammar instruction toward writing abilities, Bateman and Zidonis (1966) reported that students who received grammar instruction improved their writing abilities more than those without such instruction. Green, Johnson, O'Donovan, and Sutton (2003) discovered that sentence structures in students' writing improved between 1998 and 2002 during the NLS (DfEE, 1997b) when explicit teaching of sentence structures was introduced as an alternative pedagogy in the teaching of writing. The NLS (The National Literacy Strategy) was founded in England in September 1998. The strategy was planned for the teachers to teach a daily Literacy Hour that began with a pattern of 30 minutes whole class teaching, and then followed by group work and conclusion of the lesson with a plenary session. In addition, the study of Pazaver and Wang (2009) done with 16 immigrants ESL students who came to Canada from China, Iran, Lebanon, India, Syria, Israel, and Sri Lanka showed that these students credited grammar instruction as an instrument for communication. They saw a positive connection between grammar instruction and their writing abilities. Pazaver and Wang (2009) concluded that to write properly, students need to apply different grammatical rules to identify the mistakes in their writing assignments. They believed that this process can facilitate their language communication. Apart from this, from the most recent study of Akinbote and Komolafe (2010) carried out with 290 pupils from public primary schools in Ibadan, Nigeria, the findings of the study revealed that the pupils who received grammar instruction had a higher mean score than that of the pupils in the conventional group. This is because the teaching of grammatical features, such as capitalization, comma, punctuation, and tenses helped them write effectively. They knew how to put these elements when necessary since such elements are related to composition writing (Akinbote and Komolafe, 2010). In short, many researchers recommend the teaching

of grammar in the writing class (Hinkel, 2002a, 2004; Lorenz and Met, 1988; Santos, 1988).

Traditionally, the interest in the teaching of grammar began with the Grammar-Translation Method (Chastian, 1988). The method depends heavily on the teaching of grammar and practice of translation. It is teacher-centered and typically conducted in the students' native languages (Chern, 2003; Liu and Shi, 2007). There is little attention paid to pronunciation or any communicative aspects of the target language (Canale and Swain, 1980). The language skills focused in this method are reading and writing rather than speaking and listening (Richards, Platt, and Platt, 1992). In the classroom, students usually lack an active role since they pay more attention to correcting their own work (Barnhouse, 1981). As a piece of evidence, Kikuchi (2009) carried out a study with 47 Japanese EFL students in a university and found that the Grammar-Translation Method was one of the factors other than teachers' actions or teaching materials that demotivated the students.

To enhance the benefits of grammar teaching and remedy the old-fashioned method, Larsen-Freeman (2001: 39) suggests that a lesson should start with students' understanding in context instead of focusing merely on discrete grammar points. This is because grammar itself not only consists of rules governing forms but also includes grammatical knowledge that is the knowledge of how and when to use the forms to convey meanings in specific contexts (Larsen-Freeman, 2002). Celce-Murcia (2007) advocates that sentence-level drills could not give sufficient contexts for students to learn when and how to correctly or appropriately use the grammatical features like the use of the definite article, the passive voice, the present perfect tense, the relative clause, or any other grammar objectives since these grammatical features are concerned with contextual meanings. Nunan (1998) points out that in real-like situations, choices of appropriate use of grammar can only be conducted with references to the context and the purpose of the communication. Grammar instruction will be more useful in the classrooms where the students are given opportunities to explore the functions of grammatical items in written texts (Nunan, 1998). Therefore, in the classroom, the teacher should provide students with the tasks that clarify the relationship between grammatical items and discoursal contexts (Halliday, 1985; Nunan, 1998).

In this regard, the notion of focus-on-form instruction has been proposed. Focus-on-form instruction is a teaching approach in which the students' attention is drawn to forms of the target language presented spontaneously in meaning-based communication. Saeidi and Chong (2003) claim that this method can help students comprehend the relationship between grammar and communication. Students can learn form, meaning, and use of language in context. In addition, based on a comprehensive critique of 16 focus-on-form research studies, Han et al. (2005) found that focus-on-form instruction can have positive results in language teaching and learning, provided that it contains some characteristics like studying in a long-term period, targeting ready students, providing the opportunities for students to act on the noticed input properly, and allowing students to process the target input for meaning before processing it for them.

In terms of the treatments, focus-on-form instruction also contains many useful treatments for language teaching, such as corrective recasts (the technique used to reformulate immediately preceding erroneous utterances), input flooding (the attempt to increase students' ability in noticing the forms in the input by using a sufficient condition for making a primary interlanguage rule), etc. A study conducted by Williams and Evans (1998) showed that the intermediate-level ESL students who received input flooding had more accurate use of the passive voice than students in the control group who did not get any focus-on-form treatment. Another study in the same year carried out by Doughty and Verela (1998) found that the students who were treated with corrective recasts got better scores on the post-test than those who received teacher-led instruction.

Derived from focus-on-form instruction, form-focused instruction is another grammar teaching that aims at increasing the noticing of form in a meaningful context. However, this method allows the teachers to choose either implicit or explicit ways of teaching (Spada, 1997). When comparing between implicit and explicit form-focused instruction, it has been found that the latter seems to have more advantages than the former (Goldenberg, 2008). Ricketts and Ehrensberger-Dow (2007) reported that explicit instruction that includes presentation of rules, metalinguistic awareness, exposure to relevant input, feedback, and opportunities for practice have some positive effects on second language acquisition. To clarify this, a survey of university second

language students found that the students needed more explicit instruction in the English grammar for standard written English since sufficient knowledge of grammar can help them write paragraphs with standard English, while at the same time reducing vernacular or non-standard English (i.e. using subjective pronouns in the place of objective pronouns, omission of certain preposition, use of double negative form, mistakes in irregular verb forms, and so forth) (Valentine and Repath-Martos, 1997). In addition, Wee, Sim, and Jusoff (2009) discovered that explicit instruction in grammar usage helps students improve their grammatical and writing skills. Based on the data gathered from 39 second-year students from a public university in Malaysia, it was found that the students had fewer subject-verb agreement errors after they got special treatment in explicit instruction (Wee, Sim, and Jusoff, 2009). During the special treatment, the students received clear explanations about how to use some grammatical features necessary for writing English sentences before writing essays. They recommended that explicit instruction emphasizing target language grammatical items should be taught in the writing class. In a more recent study by Razagifard and Rahimpour (2010), it was found that the participants who got explicit feedback in the form of meta-linguistic feedback gained higher mean scores in the English course than those who were treated with implicit feedback in the form of recast. This is because the group that received the implicit treatment lacked a clear understanding in grammar usage and they were usually left with uncorrected grammatical items (Razagifard and Rahimpour, 2010).

Regarding teaching and learning in general, in the classroom where the explicit instruction is emphasized, the teacher can integrate explicit aspects of English grammatical features with meaningful activities like focus-on-form activities (Gascoigne, 2001). During the focus-on-form activities, the teacher can draw the students' attention to a target form through typographical means like underlines, bolding target structures, and color coding, which exist in a meaningful context. Ellis, Basturkmen, and Loewen (2001b) discovered that students who were engaged in communicative focus-on-form activities showed improvement in their grammatical accuracy and its use in writing. Doughty and Williams (1998) claim that the students' attention to meaning and form needs to be connected and there might be some explicit discussions about rules and practices so that the students could learn and make

grammatically correct sentences through context. The "garden path technique," for example, is one of the strategies that the teacher can use in order to help students identify and use correct forms appropriately in context (Tomasello and Herron, 1988). To apply this strategy for use in the classroom, the teacher can start a lesson with the introduction of a grammatical rule before leading the students into the situation where they can overgeneralize and consider how to use correct forms in specific contexts (Tomasello and Herron, 1988). Rodriguez (2009) advocates that in order to improve grammatical competence of students, the teachers need to include explicit form-focused instruction within the context of meaningful learning activities that allow them to practice the rules in contexts.

Since form-focused instruction emphasizes the teaching of L2 form within meaningful contexts, the topics or themes chosen and used as the context for students should be relevant to their needs. A theme-based model, one of a broader approach called "content-based instructional model," might be used as a context for studying English grammar and writing. Different from the sheltered model and adjunct model, the theme-based model has a main focus on language teaching. Its goal is to help students develop general academic language skills, such as listening, speaking, reading, writing, vocabulary, and grammar through interesting and relevant contents. The language curriculum is generally developed around selected topics drawn from one content area (e.g. medicine) or from across the curriculum (e.g. global warming). Topics or themes play the role as a vehicle for language development. It also provides an option for language teachers to teach in a team with a content specialist or by themselves in case the content specialist is not available. Moreover, the teacher can design a course from the students' interests. Examples of this approach are courses, such as introductory university students English. In addition, it is another type of the content-based approach that many researchers claim can provide teachers and students with a rich source of information necessary for doing writing tasks (Ferris and Hedgcock, 2005; Osman, Ahmad, and Jusoff, 2009; Park, 2005). The theme-based model is a key concept in student-directed learning which assists students in developing their language competence, especially writing ability (Park, 2005). With this model, the teacher and students are involved in continual discussion, analysis, and evaluation during the writing process (Ferris and Hedgcock, 2005). The learning

materials and pieces of writing that students have just written can be revised and edited. To promote its significance in the writing class, a study of 36 students who were enrolled in a three-year pre-degree program in Malaysia showed that the implementation of the theme-based model and cooperative process writing helped students improve their motivation and writing ability. During the experiment, the participants of the study were also engaged to in variety of writing phases which include brainstorming, outlining, planning, revising, and correcting written texts. Such phases are necessary for the development of students' confidence and attitudes toward learning English as a second language as well as promotion of learner involvement, learner reflection, and self-assessment (Osman, Ahmad, and Jusoff, 2009).

According to the aforementioned discussion, the present study regarded the roles of web-based instruction and form-focused instruction in language learning as vital factors to bring about changes in students' learning outcomes. The web-based instruction in this study consisted of the web-based course and the other two Web 2.0 technologies (Facebook and weblog). Facebook was used as a social networking community that allowed students to post their problems and suggestions or chat with other people in the topics concerning their grammatical competence and writing ability. The weblog was used as an online diary for them. Meanwhile, the web-based course was used as a means to transfer the form-focused instruction using explicit teaching as a treatment for grammar instruction. Furthermore, since meaningful and relevant contexts to students' disciplines were required in the form-focused instruction, applying the theme-based model, the themes in sports science were used as the context for the teaching. In this regard, this study aimed to develop and to find out whether the form-focused web-based instruction as previously mentioned could help Thai undergraduate sports science students enhance their English grammatical competence and writing ability. The study also aimed to examine the effects of the form-focused web-based instruction and investigate the students' attitudes toward this teaching tool.

1.2 Research Questions

1. What were the needs of Thai undergraduate sports science students and their stakeholders?

2. How could the form-focused web-based instruction be developed for sports science students?

3. What were the effects of the form-focused web-based instruction on:

3.1. Sports science students' English grammatical competence?

3.2. Sports science students' English writing ability?

4. What were the attitudes of sports science students toward the form-focused web-based instruction?

1.3 Objectives of the Study

1. To investigate the needs of Thai undergraduate sports science students and their stakeholders to enhance the students' English grammatical competence and writing ability

2. To develop the form-focused web-based instruction to enhance English grammatical competence and writing ability of sports science students

3. To examine the effects of the form-focused web-based instruction on:

3.1. Sports science students' English grammatical competence

3.2. Sports science students' English writing ability

4. To investigate the attitudes of sports science students toward the form-focused web-based instruction

1.4 Statements of the Hypotheses

Based on a great range of literature review, it can be concluded that the form-focused web-based instruction can enhance grammatical competence and writing ability (Ammar and Spada, 2006; Azar, 2006; Ellis, 2001; Razagifard and Rahimpour, 2010). Also, it was believed that students would have positive attitudes toward the effectiveness of the form-focused web-based instruction in enhancing their grammatical competence and writing ability. Regarding these beliefs, the hypotheses of this study were as follows:

1. The post-test mean score of grammar of sports science students who studied with the form-focused web-based instruction was significantly higher than the pre-test mean score.

2. The post-test mean score of writing of sports science students who studied with the form-focused web-based instruction was significantly higher than the pre-test mean score.

1.5 Scope of the Study

The variables in this study comprised the independent variable (the form-focused web-based instruction) and dependent variables (students' grammatical competence, writing ability, and their attitudes toward the form-focused web-based instruction). The present study aimed to develop and to find out whether a form-focused web-based instruction effectively helped Thai undergraduate sports science students enhance their English grammatical competence and writing ability. The study also investigated the students' attitudes toward the effectiveness of this type of instruction. The researcher developed a web-based course and the Web 2.0 technologies: Facebook and weblog as the supplementary learning means. The data for the course development were gathered from a needs analysis process which included questionnaires and semi-structured interviews. The gain data were used for developing lessons and activities and the web's appearance in general. The study sample consisted of 83 first-year undergraduate sports science students at the College of Sports Science and Technology, Mahidol University.

1.6 Limitations of the Study

This study data were collected only from the first-year undergraduate sports science students at Mahidol University; therefore, the results could not be generalized to other groups of students. The types of instruction were limited to the integration of form-focused instruction with web-based instruction having the aims to enhance grammatical competence and writing ability of the students.

1.7 Definitions of Terms

Form-Focused Web-Based Instruction in the present study was the integration of two teaching approaches: form-focused instruction and web-based instruction. English grammatical features were taught explicitly on the website using the themes/topics in sports science as the context for study. The web-based instruction comprised the web-based course and the other two Web 2.0 technologies: Facebook and weblog. The main goal of the course was that by the end of the course, students would have developed the abilities to write with grammatically correct sentences in a paragraph level under the assigned topics. For the objectives of the course, it was expected that students would (1) have an overall understanding of the English grammatical features and structures necessary for writing, (2) be able to use the English grammatical features and structures to form a paragraph appropriately and accurately, (3) write a well-organized and meaningful paragraph under the assigned topics, and (4) identify and correct English grammatical errors. Basically, the course consisted of grammar lessons, video presentations about English grammatical features taught with the form-focused instruction, cloze tests, error recognition tests, grammar and writing games, and other related activities. As for the other two Web 2.0 technologies, Facebook was served as a social networking community for students to discuss their learning with their teachers and other peers. Meanwhile, the weblog was used as a free space for them to practice writing.

Theme-Based Model was applied for use as a meaningful context in the form-focused instruction. By doing this, themes or topics in sports science, such as (1) general aspects of sports science, (2) ethics and legal issues in sports, (3) sports nutrition, (4) sports equipment, (5) types of sports, (6) sports marketing, (7) accidents and medical treatment, and (8) sports psychology were used as the context for teaching English grammar as well as enhancing students' writing ability. The theme-based model helped students see how to use English grammatical features in various contexts--with the belief that students would be able to apply English grammatical features they learned from the themes in sports science to use in their writing. All of these themes were derived from the curriculum of undergraduate sports science students at the College of Sports Science and Technology, Mahidol University.

Grammatical Competence referred to the students' grammatical competence which could enable them to enhance their writing ability. It was expected that after studying from the form-focused web-based instruction, the students would be able to write paragraphs with more correct forms of the English grammar. Their grammatical competence was assessed by the pre-test and post-test. The grammar part of the pre-test and post-test consisted of multiple-choice cloze tests and error recognition tests which came in the form of short passages. To make certain that the form-focused web-based instruction could enhance the students' grammatical competence, it was expected that the students would gain higher mean scores in the post-test that were enough to show statistically significant differences from the pre-test.

Writing Ability referred to the ability of the students to write English in a paragraph level with grammatically correct sentences using the themes in sports science. Writing ability was assessed by the writing skills of the students (i.e. using grammatically correct sentences, writing paragraphs with well-organized contents, having meaningful topic sentences, being able to convey main ideas, using supporting details, and so forth) based on the results obtained from the writing part of the pre-test and pos-test and students' pieces of writing on the weblog.

Sports Science Students are the students at the College of Sports Science and Technology, Mahidol University. In this study, there were both male and female students and all of them were first-year university students. In the first academic year, students in this group were required to take the 'English Level 1' course as a compulsory course. They were chosen as the sample of the study since this group of students usually got the lowest scores in the writing test of the English course. Their mean score in English writing resulted in the previous semester was lower than the mean score of students from other faculties at the significant level.

1.8 Significance of the Study

The Internet has dramatically changed the way people live, and it has come to play an important role in education. Theoretically, the use of the Web in language teaching and learning can be related to several theories in second language acquisition, especially the Social Constructivism theory. Web-based instruction can play the role of more knowledgeable others helping students construct new knowledge and move

from their actual stage of development to potential stage of development. Web 2.0 technologies, like Facebook and weblog, can build communities of practice that allow students to chat, collaborate, negotiate, and discuss their learning with their teachers and friends. In terms of form-focused instruction, this type of teaching integrates form and meaning within a context. In comparison with the focus-on-form instruction, the form-focused instruction seems to be more flexible in choices of teaching since it allows the teachers to choose either explicit or implicit treatments in language teaching (Spada, 1997). As for explicit instruction, there are many researchers who confirm its advantages toward developing writing ability of students (Musumeci, 1997; Ricketts and Ehrensberger-Dow, 2007; Rodriguez, 2009; Seliger, 1979; Sharwood-Smith, 1981; Wee, Sim, and Jusoff, 2009). This is because explicit knowledge of English grammar enables students to write sentences correctly. Apart from this, since form and meaning in the form-focused instruction are connected within context, the topics or themes chosen and used as the context for students need to be relevant to their needs (Herrero, 2005). The present study included the theme-based model as one of the independent variables. The researcher believed that teaching grammar through the theme-based model would help students develop their English writing ability since they could see how some specific grammatical items were used appropriately in particular contexts.

To highlight this importance, this study aimed to develop a form-focused web-based instruction to enhance the English grammatical competence and writing ability of Thai undergraduate sports science students. The researcher also investigated the students' attitudes toward the instruction. If the results of the study showed that the form-focused web-based instruction could enhance the students' grammatical and writing ability, there would be some benefits for the following stakeholders.

Significance for students. Students will have a type of web-based instruction that better matches their needs. They can access and do activities on the web anytime and anywhere. They can save money and time because they do not have to visit the library or self-access learning center very often as before, but they can study at home. Students can review the lessons and practice grammatical and writing abilities from activities on the web. They can discuss their problems in writing with their teachers and friends on Facebook or practice writing on the weblog, all of which can be linked

in the web-based course. As a result, their grammatical competence and writing ability are expected to improve. They will get better grades in the English course, and if their language competence stile keeps improving, they will eventually be able to use the English language with more confidence both in their daily life and future professions.

Significance for teachers. Teachers can employ form-focused instruction blended with the theme-based model in their own writing classes or other skill-focused courses. They can draw students' attention to how to use some grammatical items which are regarded necessary for writing ability. They can assign students to read or listen to texts and then explain how some grammatical items are used in such texts. Teachers can assign students to apply these grammatical items to write their own pieces of writing.

Significance for course developers. Course developers can use the present web-based instruction as a guideline for developing their own language courses. They can apply the process of language course development of Graves (2000) that was employed in the present study as the framework of the course. They can apply types of activities, lessons, modules of the course, and so forth to develop their language courses.

Significance for the institution. The institute will have an effective web-based instruction for undergraduate sports science students that can enhance their grammatical competence and writing ability. Moreover, the present web-based instruction can be further developed for students of other faculties or even be extended from writing instruction to other language skills.

CHAPTER II
LITERATURE REVIEW

In order to develop a form-focused web-based instruction that effectively enhances English grammatical competence and writing ability of Thai undergraduate sports science students, a review of the literature was conducted. The review comprises the course development, form-focused instruction, web-based instruction, Social Constructivism, and other related areas that are concerned with English grammatical competence and writing ability.

2.1 Course Development

2.1.1 Framework of the Course

Graves (2000) suggests a framework for the language course development. It comprises defining the context, articulating the belief, conceptualizing content, formulating goals and objectives, assessing needs, organizing the course, developing materials, and designing the assessment plan for the course.

1. Defining the context

Context is information about target students (ages, genders, levels of study, fields of study, family history, and language background knowledge) and places where they study the language (classrooms, colleges, universities, and schools).

2. Articulating the beliefs

The beliefs that influence the course development include views on language, the social context of language, language learning and learners, and teaching.

a. View on language is how a language should be taught, such as the belief that language is rule governed and meaning-based.

b. Social context of language is related to the sociopolitical issues, such as education and future work of the students.

c. Language learning and learners are issues about learning styles of students.

d. Teaching is the role of teachers, such as being facilitators, counsellors, and so on.

3. Conceptualizing content

The course content is conceptualized based on language, learner, and social

context.

a. Focus on language includes linguistic skills (grammar, vocabulary, etc), topics and themes, competencies (speaking, writing, reading, and listening), content, situations, communication functions (use of language in everyday lives), tasks, and genres (identifying language errors, editing language, etc.).

b. Focus on learning and the learner includes affective goals (developing positive attitudes in language learning), interpersonal skills (commenting and suggesting about language uses of other students), and learning strategies (autonomous learning, learner-centeredness, etc.).

c. Focus on social context includes sociolinguistic skills (the appropriate use of language in different groups of people), sociocultural skills (customs, values, and cultures of English native speaking countries), and sociopolitical skills (using language in the workplace)

4. Formulating goals and objectives

The goal is the learning outcome as a whole. It is what the students are expected to reach by the end of the course. The objectives are developed and extended from the goal showing more abilities the students are extended to reach.

5. Assessing needs

Needs and preferences of students in language learning include learning and teaching styles, language skills, topics under study, and other factors they want to study and consider as an important thing for their language learning.

6. Organizing the course

Course organization is about the number and order of lessons, topics under study, and types of activities (exercises, quizzes, role plays, games, etc.).

7. Developing materials

This concerns how learning materials (quizzes, games, exercises, etc) are developed. For example, a web-based course is developed by computer programs, like Hot Potatoes Version 6, Windows Movie Maker, Dreamweaver, to name a few.

8. Designing the assessment plan

This concerns how to assess the students' progress and achievement in language learning. There are formative assessment and summative assessment. Formative assessment is the progress of students' language learning ability which can

be assessed by assignments or quizzes. Meanwhile, summative assessment is the achievement in language learning evaluated by mid-term or final examinations.

Given the above discussion, course developers need to consider learning contexts and theoretical frameworks as a background for developing a course. Following this, they have to conceptualize content, formulate goals and objectives, assess needs, organize the course, develop materials, and design the assessment plan. In particular, assessing needs is such an important step for course developers since it helps them achieve understanding of students' needs.

2.1.2 Needs Analysis

According to Graves (2000), needs analysis or needs assessment is a systematic and continuous process concerning gathering information from students' needs and preferences, interpreting the information, and making decisions about course designs. Furthermore, based on Berwick (1989: 55), the needs include "felt need" which stands for needs of students and "perceived need" which is how the teacher, the institution, and other stakeholders view the needs. Bailey (1998) points out that the main purpose of needs analysis in language instruction is to help teachers and other stakeholders obtain the information about the students' abilities in an appropriate and consistent manner that is likely to be used. With respect to its benefits in general, as a result of needs analysis, students will have more opportunities to identify their needs and this helps them control their learning (Graves, 2000). For teachers, they can use the results obtained from needs analysis to make decisions about course development.

Regarding the necessity of needs analysis in language teaching, to conduct a needs analysis, the teacher or the course developer needs to consider the process of needs analysis which comprises a set of decisions, actions, and reflection as listed follows:

1. Deciding what information and why it is needed to collect.

2. Deciding the best way to collect the information by asking yourself "when," "how," and "form whom."

3. Collecting the information.

4. Interpreting the information.

5. Acting on the information.

6. Evaluating the effects and effectiveness of the action.

7. Deciding whether there is further or new information to collect.

(Graves, 2000: 100)

Other than this, in order to design a course that meet the needs of the majority of students, it is important to consider both the current state of students (other attitudes and preferences in language learning before taking the course) and the desired goals and abilities or what the students are required to achieve by the end of the course. To help students reach the desired goals of the course, Graves (2000) makes a list of information needed to collect while conducting a needs analysis. It comprises present and future information. The present information includes the following issues:

1. Who the students are (information about their age, gender, educational background, profession, and nationality)

2. The level of the students' language competence (all four language skills, such as speaking, listening, reading, and writing, and abilities in other skills like grammar, vocabulary, pronunciation, and functional skills)

3. The level of the students' intercultural competence (their levels of understanding and skills about experience in cultures of the target language)

4. Their interests (topics or contemporary issues the students are interested in)

5. Their learning preferences (in what way the students are expected to be taught or tested)

6. Their attitudes toward themselves in language learning, and the target language and its cultures

(Graves, 2000: 102-103)

In terms of future information, it consists of four main issues as follows:

1. The students' goals and expectations (the reasons that make the students take the course, their goals and expectations in general)

2. The target contexts (in what situation the students will use the language, what topic and content they need to communicate and know about)

3. Types of communicative skills and tasks the students need (what their purposes in using the language are)

4. Language modality they will use (their requirement in the use of language skills like speaking, reading, listening, and writing)

(Graves, 2000: 102-103)

In addition to the aforementioned information, there are some other factors that are needed for consideration. It includes the purposes of the course, belief about types of instruction that will help students reach the desired goals, and recent information that we already have about the students (Graves, 2000).

Relating to the web-based course development, Hadjerrouit (2010) claims that web-based learning resources (WBLRs) are valuable tools that can enhance the process of teaching and learning since through the web, students can experience a wide range of new knowledge which is rarely possible in a traditional language classroom. However, it was found that much of the development of web-based learning resources (WBLRs) has been developed without a clear understanding of the issues which are directly related to learning and teaching (Akpinar and Simsek, 2007; Farrell and Carr, 2007). Moreover, the developing courses also lack students' involvement in the development of web-based learning resources (WBLRs) (Hadjerrouit, 2010). Responding to this, there are many researchers who claim that the process of needs analysis is required for designing and developing web-based courses (Doughty and Long, 2003; Hadjerrouit, 2010; Kukulska-Hulme and Shield, 2004; Laurillard, 2002; Leacock and Nesbit, 2007; Nokelainen, 2006; Quesada and Aust, 2006) They recommend that course developers need to design web-based courses which closely meet the needs of the students (Kukulska-Hulme and Shield, 2004; Laurillard, 2002; Leacock and Nesbit, 2007; Nokelainen, 2006). Doughty and Long (2003) claim that to make an effective program for students, distance language programs like web-based courses require careful planning on the basis of a clear understanding of students' needs. This is because an appropriate technology used for delivering the courses can be selected and developed only when all types of students' needs are clearly understood.

Regarding the needs analysis as a part of web-based course development, to conduct a needs analysis, course developers need to collect information about students' background, such as age, knowledge, level, gender, interests, needs, motivations, and computer skills (Hadjerrouit, 2010). Then they gather information

about school teachers, background knowledge and teaching styles of teachers, and attitudes toward online learning. Lastly, they need information about the policy of the institution. For students, Hadjerrouit (2010) claims that students should be involved throughout the process of course development in order to ensure that the course will meet their needs and learning objectives of the core course. Additionally, the design of web-based learning resources (WBLRs) needs to promote a learner-centered environment by allowing students to explore the content of the subject matter as well as enhancing their learning through interactive, flexible, differentiated, authentic, and motivating activities (John and Sutherland, 2009). The students should be involved in the developing process from the beginning in order to ensure that pedagogical perspectives of the course are relevant to those of students' learning preferences. Hadjerrouit (2010) adds that the most important drawbacks of web-based learning resources (WBLRs) should also be examined and corrected before they are implemented in the class.

Previous research has shown that a needs analysis has proven effective for the development of web-based courses. Quesada and Aust (2006), for example, conducted a project on the development and evaluation of a type of technology resources named "CyberL@b" and the affiliated English language learning instruction. In the project, a needs analysis was conducted with 416 students in 7th, 8th, and 9th grades from six Costa Rican high schools. Three of the schools were from rural areas and the other three from urban areas. Basically, "CyberL@b" is a web resource that includes interactive media resources which are designed to enhance students' learning ability in authentic contexts. The four language skills, such as listening, speaking, reading, and writing are integrated in the project with social interactions. It was found that the needs analysis had effectiveness in this study since the data gained from the needs analysis process helped the teacher design an effective "CyberL@b" resource that met the students' needs. From the initial implementation of "CyberL@b", the authentic activities the students engaged in "CyberL@b" were relevant to their needs. The students became more autonomous and self-directed. The teachers could use more teacher-centered methods in their class. From the data obtained from the needs analysis with relationship to language skills, it indicated that conversations with tourists, computer programs and video games, movies, and emails of class notes were

important contributors to language learning. Moreover, both rural and urban high school students revealed that speaking skills were the most important skills for them to have a good job, negotiate with tourists, study in other countries, and communicate with people from other countries and cultures. Both groups also agreed that conversations with tourists, computer programs, movies, and class notes were the most important resources for practicing and learning English. In more details, according to the needs of the students in rural high schools, they viewed the Internet, computer programs, textbooks, and dictionaries as useful resources in practicing their reading skills. For listening skills, they thought that the teacher's instruction, the teacher him/herself, native speakers of English, and movies were the most important resources. Referring to writing skills, they depended on class notes, emails, tests, and homework. For speaking skills, the most important resources were having conversations with tourists, friends, classmates, and the teacher as well as having oral presentations in the classrooms (Quesada and Aust, 2006).

Overall, these participants thought that computer programs, video games, Internet web pages, movies, tests, class notes, talking to tourists and native speakers, and listening to the teachers in the classrooms were the most important resources for practicing listening, speaking, reading, and writing. For the students in the other three urban high schools, they claimed that the most important resources for reading skills included the Internet web pages, emails, video games, and computer programs. For listening, the most important resources were movies, TV cable, and the teacher. This group of students claimed that email, class notes, and tests were necessary resources for writing skills. For speaking, they believed that the most important resources were having conversations with tourists, friends, and the teacher, and having conversations and oral presentations in the class. From their points of view, the most effective resources for speaking were conversations with friends, tourists, and oral presentations. For writing skills, they needed email and class notes. For listening skills, they claimed that movies, TV Cable, and the teacher were the most important resources. For reading skills, they stated that computer programs, video games, and Internet web pages were necessary for developing the reading skills (Quesada and Aust, 2006).

It can be said that doing a needs analysis plays a variety of significant roles in course design and development since it not only helps teachers and course developers identify the problems in teaching and learning but also discover students' preferences. They can use the information to design and develop the course that meets the needs of the majority of the students and has perspectives relevant to the course objectives stated by the institution. As a result, the students will reach the desired goals and expectations stated in the course with favorable environment.

2.1.3 Development of the Web-Based Course for Sports Science Students

In the classrooms, students come with several different learning preferences (Dixon, 2008). They have their own learning styles which help them learn most effectively and comfortably. However, with the mismatch between students' learning styles and teaching styles, students can feel frustrated with the lessons they are studying (Dixon, 2008). For example, most of elementary instruction in literacy usually focuses on auditory first, visual second, and no kinesthetic. Students whose learning style is kinesthetic may face difficulty or lose motivation in learning if they are taught in uncomfortable ways. On the contrary, if the teaching style matches with students' learning styles, it can bring fun in learning (Dixon, 2008). Having fun stimulates the cerebral cortex, a part in our brain that is responsible for imagination and higher thought (Dixon, 2008). Most importantly, having fun in learning is necessary since the right brain cannot be engaged without it and the comprehensive skills also depend on the right brain.

In case of sports science students, the majority of them are kinesthetic learners. People who have bodily-kinesthetic intelligence usually have the capacity to use their body in expressing feelings and ideas as well as using hands to create or transfer meanings. People in this group are mechanics, sculptors, artists, athletes, etc. They perform best in an active learning environment where they can experiment and learn by doing (Burd and Buchanan, 2004). They need real world practice. Students with kinesthetic intelligence like sports science students have muscle strength, flexibility, speed, sensitive touching, dexterity, balance, and harmonious function of muscles. The activities for kinesthetic students can be dramatized stories, game boards, puzzles, card games, simulation, interactive vocabulary and grammar, story retelling, building graphs, teaching outdoors, etc. These kinesthetic learning activities can be used with

students in any class from seminar to mega-lectures as well as K-12 students through graduate courses (Begel, Garcia, and Wolfman, 2004).

To design a web-based course for students with kinesthetic intelligence, the course developer needs to consider personality, technical tools, and resources to achieve success (Burd and Buchanan, 2004). For personality, when learning from online courses, students must be enthusiastic and willing to learn. They should be motivated and self-directed. Students must manage their responsibilities to allow enough time for both their regular class and online course. For technical tools, the Internet should be easy to access without any firewalls or other security systems to interfere. The connection must be fast enough to download large files and virtual chat. There should be technical supports and troubleshooting provided on the web. Moreover, the resources both synchronous and asynchronous environments that use a variety of technologies must be available for access (Burd and Buchanan, 2004). Concerning this, many scholars give suggestions for developing and learning in online learning course. For students to become successful in online learning environments, Buchanan, Burd, and Armstrong (2004) recommend students' steps for success as follows:

1. Reading mentioned background materials before the date the course starts.

2. Giving a short look through all contents on the web in order to be familiar with the layout of the course.

3. Noting the time for chat and making important arrangement to be up-to-date.

4. Accessing the web at least once a day to see what other peers have posted.

5. Trying to meet the due date for each day's activities.

6. Keeping important dates and events by using the calendar within the web-based course or other course management systems.

An online course which is suitable for kinesthetic learners must have practical exercises. There should be activities that encourage them to try out, experience, imitate, and practice concepts and ideas since practical application is necessary for kinesthetic students (Bonk and Zhang, 2006). For the web-based course, the course designer can include interactive technology, such as gaming interference, interactive flash animations, simulation with 3D graphics, drag and drop technology or virtual reality environments like "Avatar-Based Instruction and Virtual Reality." For flash

technology with drag and drop, it can function well with kinesthetic students because it is how the physical movement translates to the online movement (Summers, 2007). Moreover, there are electronic field trips in which students can feel like they are exploring the depth of the sea (Dickinson, 1998).

Highlighting the importance of the steps in designing the web-based course, Clark (1991) suggests five factors to be considered as listed below:

1. *Entering behavior.* The teacher needs to understand motivation, goals, and levels of understanding of students.

2. *Instructional objectives.* There should be clearly defined objectives and goals built on knowledge of entering behavior.

3. *Designing the learning units.* The teacher can use a variety of technologies to design effective online units.

4. *Presenting and performing.* The teacher utilizes practical ways for delivering contents to students.

5. *Assessing performance.* Both summative and formative assessments must be included. Formative assessment occurs during the course and feedback from both the teacher and students are included. Meanwhile, summative assessment is used to evaluate the achievement of the learning objectives at the end of the course.

Apart from this, Chickering and Ehrmann (1996) propose "Implementing the Seven Principles: Technology as Lever." They suggest good practices to promote online learning listed as follows:

1. Encouraging contact between students and faculty.

2. Developing collaboration and cooperation among students.

3. Using active learning techniques.

4. Giving prompt feedback.

5. Stating time on tasks.

6. Communicating with high expectations.

7. Showing respect to varied talents and different ways in learning.

All of the above mentioned information is necessary for developing a web-based course for students with kinesthetic learning preference like sports science students. Kinesthetic students learn from doing and seeing. They learn from real world cases. Course developers need to know learning styles, needs, and preferences of

students in order to develop an effective web-based course. For example, if they know that most of the students are types of kinesthetic learners, they can add some challenging activities like language games in the course. As for the teaching of writing on the web-based course, course developers can use some topics that easily attract their interests like those in their subject matters. With the sufficient information of the students' learning styles, it will be easy for the teacher to teach his/her students.

2.2 Effects of Attitudes on Success in Language Learning

It has been accepted that attitudes influence learning behavior (Cotterall, 1995; Cotterall, 1999; Reid, 1987). Over the years, researchers have concentrated on determining how attitudes affect language learning success. They found that the effects are mostly beyond their assumption. This is because positive attitudes contribute to willingness to do activities, whereas a negative attitude strongly correlates with refusal or avoidance (Avery and Ehrlich, 1992; Clement, 1986; Gardner, 1991; Gass and Selinker, 2001; LoCastro, 2001; Pavlenko, 2002; Skehan, 1989). The following are the effects of attitudes toward doing activities in the classrooms:

1. *Self-correcting errors.* Positive attitudes and integrative motivation can promote systematic error correction and subsequent language development in the classroom (Skenhan, 1989: 57).

2. *Using inductive reasoning.* Students who have positive attitudes will be more likely than others to form hypotheses about structures in the second language (Skehan, 1989).

3. *Participating in the classroom.* Students with positive attitudes will be eager to participate more often and more enthusiastically than those with negative attitudes (Gardner, 1991).

4. *Learning vocabulary.* The speed of learning paired-associate vocabulary has been shown to be directly linked with scores on Gardner's Attitude Motivation Index, the AMI (Skehan, 1989).

5. *Seeking out or taking advantages of situations for practice.* Gardner (1991) and Gass and Selinker (2001) claim that positive attitudes help students improve their second language, while negative ones may diminish the amount of language input.

This is because attitudes do not determine only the quantity, but they also determine the quality of learning (Clement, 1986).

6. *Learning and using pragmatics*. Positive attitudes accommodate second language pragmatic norms (LoCastro, 2001).

7. *Adapting to a new system of phonology*. Positive attitudes influence a desire or avoidance to come along with members of the second language culture, which determines how successful a student is in achieving native-like pronunciation (Avery, and Ehrlich, 1992; Pavlenko, 2002).

8. *Cognitively restructuring linguistic systems*. Students with positive attitudes are more willing to learn more new syntactic and morphological elements and integrate them into their L2 speech (Skehan, 1989).

9. *Continuing in language study after it is no longer mandatory*. According to Gardner (1991), attitudes are related to the preference of language study. For instance, it plays the role of a predictor to predict whether students will continue their study or drop out.

Besides the effects of attitudes toward learning success given above, Gardner and Lambert (1972) examined the relationship between attained proficiency and learners' motivation and attitudes in a variety of foreign language contexts. The findings show that in case of Canadians in Montreal, the students were successful in learning when they had more integrative motivation and positive attitudes in language learning. Also, in the case of Filipinos who had instrumental motivation, Gardner and Lambert (1972) found that they continued to be successful language learners. They sounded very eager to study in the classroom and to use the language in real communication. Based on the empirical evidence, Gardner and Lambert (1972) concluded that strength of motivation and attitudes contribute to the success of language learning. In a more recent study, qualitative research like that of Syed (2001) highlights the importance of attitude in motivation for second language acquisition. Syed (2001) conducted a study with a group of students who were learning the Hindi language, and it was found that at first they mentioned a number of academic and personal reasons; however, what really promoted their learning was a love and appreciation of the language itself.

To promote the importance of attitudes in language learning, Schumann (1978)

claims that affective filters such as motivation and attitudes can be important variables in second language acquisition. In order to clarify the connection between attitude and learning success, Krashen's Monitor Model which suggests that language is acquired through an affective filter was first introduced in 1982 (Krashen, 1982). This filter as part of attitudes has the power to either permit or block language input from reaching the part of a student's brain that functions in language acquisition. Based on the model, Krashen (1982) claims that attitudes can facilitate or obstruct second language acquisition at the same time, depending on whether students have positive or negative attitudes.

According to the aforementioned discussion, it can be said that having positive attitudes can facilitate and contribute to second language acquisition. Quite contrary, students who are enrolled in the course with negative attitudes usually lack willingness to study which subsequently reflect their learning outcomes in the future. This is because positive attitudes can motivate students to study with more enthusiastic feelings in the classroom and out of class. Teachers and course developers need to consider attitudes of students. The web-based course should be built upon their positive attitudes which meet students' preferences, so that the students will be able to achieve the best outcome of the course.

2.2.1 Effects of Students' Attitudes on Learning through Web-Based Instruction

According to Rosenberg and Hovland (1960), attitudes refer to behavior relationship or responses to stimuli which include cognitive, affective, and behavioral responses. For Krech et al. (1962), attitudes are continuing system of positive and/or negative evaluations, emotional feelings as well as pro or anti action tendencies. Besides, many scholars define the definitions of attitude with its connection to students' behavior (Eagly and Chaiken, 1993; Fazio, 1986, 1995; Fishbein and Ajzen, 1974; Kraus, 1995). Bem (1972), for instance, points out that attitudes can be inferred from behavior in accordance with the self-perception principles which involve many different domains, such as religious behavior, environmental behavior, and humor (Chaiken and Baldain, 1981; Olson, 1992; Salincik and Conway, 1975).

Referring to web-based courses, many researchers claim that students' attitudes are important factors that affect the effectiveness of the web-based system (Burkhardt,

1994; Davis, 1989; Garcia, 2001; Lucas, 1981; Rice and Aydin, 1991). Cotterall (1995) suggests that since students' behavior is controlled by attitudes and experience, such attitudes and experience can either help or delay the learning progress. Cotterall (1995) adds that students' attitudes are necessary for web-based autonomous learning behavior because their attitudes have a significant influence on their learning. However, positive attitudes do not always lead to learning autonomy because there are other factors the teacher needs to consider. Ming (2009) suggests that to develop web-based autonomous learning behavior, collaborative learning should be included. The teacher needs to put their roles in enhancing language instruction through web-based courses (Ming, 2009). For the web-based course itself, Ming (2009) claims that the web-based course can develop students' positive attitudes since in a web-based environment, students can learn through a large amount of language input as well as audio and visual resources, which can easily stimulate their learning. Furthermore, Altun (2005) points out that the positive attitudes of students can enhance their participation in the online learning community.

To clarify the effects of positive attitudes on the web-based courses, several studies have revealed that the quality of students' writing and their attitudes toward writing ability were improved after accessing computer and online learning tools, such as the Writing-Aid and Author's Helper (WANDAH), computer writing systems, computer assisted collaborative writing software, electronic mails, word-processing, computer mediated networked environments, and web-based materials (Allen and Thompson, 1994; Beyer, 1992; Braine, 1997; Chambless and Chambless, 1994; Davis and Mahoney, 1999; Hart, 1992; Hood, 1994; Jackiewicz, 1995; Jones, 1994a; Liou, 1997; Pennington, 1993; Shaver, 1986; Snyder, 1993a; Sullivan and Pratt, 1996; Zoni, 1992). From the earlier studies, Pennington (1993), Sullivan and Pratt (1996), Braine (1997), and Liou (1997) found that the quality of writing of ESL students who had positive attitudes toward writing on the computer had improvement. Ward and Newlands (1998) found that students preferred to study in a web-based environment because it provided more effective learning resources as well as more flexible learning pace. Similarly, in the study carried out by Tyan and Hong (1998), it was found that the students who studied in a Business Policy course had positive attitudes toward the use of computer-mediated communication tools. They revealed that the integration of

such tools assisted them in communicating with their peers and the teacher (Tyan and Hong, 1998). Additionally, Huang (1999) found that EFL college students developed their positive attitudes on the use of the Internet in the writing course after doing the Internet-based assignments. From the survey of teachers, library media specialists and students in grades K-12, the participants of the study claimed that the Internet was useful for motivating students (Huang, 1999). Huang (1999) reported that the EFL college students who used Internet-related assignments developed positive attitudes toward using the Internet in the teaching of writing.

From the more recent studies, Al-Jarf (2004) reported the results obtained from the experimental students' responses to the post-treatment questionnaire. The participants of the study stated that the use of technology developed their positive attitudes toward the writing process (Al-Jarf, 2004). The technology increased their self-esteem, motivation, sense of achievement, and improvement in their writing ability. It not only made the writing task become enjoyable but also encouraged more writing and exchanging of thoughts outside the classrooms (Al-Jarf, 2004). In the study of 53 students from the Department of English Language Teaching (ELT) at Abant Izzet Baysal University (AIBU), it was found that the students seemed to develop positive attitudes toward the use of asynchronous communication tools in their language teaching program (Altun, 2005). They claimed positive reflections in the use of computer-mediated communication (CMC) tools integrated in teaching and learning (Altun, 2005). They also showed their interest in the use of these tools in their future professional development. Recently, Nam and Jackson (2008) found that the participants in general showed positive attitudes toward web resources implemented in the web-based GPS supplemental learning environment. Most of them wanted to use the web-based materials as an addition to their course. In addition, based on 263 questionnaires completed by Chinese undergraduate students, it was found that as a whole, the students in the study had a positive attitude toward web-based autonomous English learning (Ming, 2009).

In brief, positive attitudes of students can lead to the achievement of their learning. Referring to previous research, students who have positive attitudes toward learning on the web can improve their language skills, especially writing skills since the technology like a web-based course not only enhances students' self-esteem,

motivation, and sense of achievement but also improves their writing. Moreover, learning on the web, students will learn with more enjoyable feelings because the web contains both audio and visual elements that can captivate their interests.

2.3 Communicative Language Teaching (CLT)

Tracing the past, in the 1970s, the definition of foreign-language competence moved from traditional structural components of language to various components of language ability which are needed for successful communication. Such components are referred to as communicative competence (Canale and Swain, 1979). Canale and Swain (1979) introduced a model of communicative competence that comprises three main components, such as grammatical competence, sociolinguistic competence, and strategic competence. Grammatical competence is knowledge of lexical items and rules of phonology, morphology, syntax, and semantics. Sociolinguistic competence is composed of two sets of rules, comprising sociocultural rules of uses and rules of discourse. The sociocultural rules of use are the ways utterances are produced and understood appropriately in particular contexts. The appropriateness is based on the factors, like the topic, the role of the participants, and the setting (Canale and Swain, 1979). Meanwhile, the rules of discourse are rules of cohesion in form and coherence in thought. For strategic competence, it includes the use of verbal and nonverbal communication strategies to compensate for breakdowns in communication based on performance variables and insufficient competence.

Regarding language teaching, the belief in communicative competence was adapted to be used in the approach named communicative language teaching (CLT). According to Krashen (1985), the main concern of communicative language teaching (CLT) is to expose students to comprehensible input, emphasizing the use of language in genuine interactions. In CLT, meanings dominate structures and forms, setting communicative competence as the goal of learning (Finocchiaro and Brumfit, 1983). The approach is student-centered and meaning-based. In the classroom where CLT is employed, the teachers need to implement real-life communication in order to encourage students develop linguistic fluency not just accuracy (Brown, 1994: 77). The communicative task also needs to enhance students' abilities to comprehend,

produce, and interact in the target language while their attention is principally drawn on meaning (Nunan, 1989).

However, recently, CLT has expanded its definitions to include some focus on language structures through corrective feedback within specific contexts (Lightbown and Spada, 1999; Long, 1991; Lyster and Ranta, 1997; Nassaji, 1999). Consequently, based on this approach, successful learning comprises not only knowledge of the functions and purposes of a language use in different communicative settings, but also the structures and forms of the language (Lightbown and Spada, 1999: 172). Regarding its capacity that promotes some focus on language and learning in real settings, this moves communicative language teaching to come closer to form-focused instruction.

Form-focused instruction is a type of instruction that stresses the importance of communicative language teaching principles which consist of authentic communication and student-centeredness as well as maintains the value of the occasional and overt study of problematic L2 grammatical forms (Long, 1991). The main concern of a form-focused lesson is to help students notice forms in the input by drawing their attention on a linguistic form that exists in the context of a lesson focusing on meaning. When students experience some difficulties in the comprehension or production of certain L2 grammatical forms, teachers and other peers can assist them in noticing their errors and increase their comprehension by providing some explanations and examples. In addition, students can help their friends notice the forms they currently lack. This collaborative learning is related to communicative language teaching.

Most scholars who support the use of communicative language teaching suggest activities that require attention to form in order to maintain meaningful communication (Lee and VanPatten, 2003; Nassaji, 1999). Savignon (2002:7) points out that when involvement in communicative events is the center of language development, attention to form is required. Therefore, the modern language textbooks that use the communicative approach need to keep a balance between form-focused and meaning-focused activities. However, according to Long (1991) and Long and Robinson (1998), it was found that there is a slight difference between form-focused instruction and the purely communicative language teaching since the latter approach

seems to spend little or no time on the discrete parts of language. Its focus is on the use of language in real-life situations. Such a type of instruction can be seen in the Natural Approach (Terrell and Krashen, 1983), which does not allow direct grammar teaching. However, Long (1991) and Longs and Robinson (1998) claim that the focus on the discrete forms of CLT through correction, negative feedback, recasts, direct explanations, etc. that happen occasionally can make students be able to understand and acquire difficult forms. In addition, Lightbown and Spada (1999) point out that form-focused instruction and corrective feedback provided within communicative contexts can benefit L2 students.

For the form-focused instruction itself, this approach speeds up the rate of learning, helps students in their learning processes to gain long-term accuracy, and raise the ultimate level of learning achievement. Ellis (1994) advocates that form-focused instruction can result in increased accuracy and speed up progress through developmental sequences. To manage the form-focused instruction to be used effectively, the teacher needs to adopt an integrated methodology (Willis, 1996). S/he needs to keep the balance between form-focused activities which aim at linguistic accuracy and communicative interaction which involves students in the use of the target language and meaning negotiation (Nunan, 2001). To do so, there are some activities that integrate form-focused instruction within communicative language teaching classrooms. A task-based model with linguistic forms embedded, for example, can keep a balance between a focus on form and focus on communication (Skehan, 1996; 1998). The task consists of three phases. The pre-task phase promotes cognitive and linguistic preparation of students by introducing some task topics, activating their prior knowledge related to the topics, observing and doing similar tasks, and channeling and planning attentional resources on language form. During this phase, it accepts explicit and implicit teaching of specific language forms which are regarded useful in the next task. Next, in the second task phase, the teacher adjusts communication pressure and task difficulty by using some methods to keep the process balance. In the post-task phase, students are reminded about the importance of forms. This model focuses on student-centered and constructive. Students can benefit from such a communication-oriented classroom that allows a focus on form within

meaningful contexts. They have more opportunities to discover the use of particular forms to communicate effectively (Nunan, 2001).

From previous studies, it was found that communicative language teaching can work well with form-focused instruction. In the study carried out by Xiao-xia (2006), it examined the effectiveness of form-focused instruction in a communicative classroom. The participants of the study were 72 English majoring freshmen in 2003 in Gongshang University. The researcher divided them into three classes: Class 0302 (with 23 students) was the experimental class and was treated with the integrated method (form-focused instruction and meaning-based method), Class 0301 (with 24 students) treated with a form-focused method, and Class 0304 (with 25 students) treated with a meaning-based method without explicit instruction on language forms. The results of the study showed that the proficiency level of Class 0302 which was treated with the integrated method was higher than both of the control class ($F = 3.862$; $p = .026$). Based on a 2-tailed t-test, the improvement difference between Class 0302 and Class 0304 was significantly different ($p=.010418$, $p \leq .05$). These results indicate that form-focused instruction in a communicative classroom benefits the development of students' inter-language system (Xiao-xia, 2006). The researcher suggests that to have appropriate and successful communication, students need to have both linguistic accuracy and fluency. Moreover, they need to be involved in communicative interaction that allows them to solve their real-life problems (Xiao-xia, 2006).

In brief, communicative language teaching originally focuses on teaching a target language in real communication. The approach emphasizes the importance of fluency rather than accuracy. However, with the fact that some forms of the target language can change the meanings of the utterance, the definition of communicative language teaching expands itself to include focus on language structures through corrective feedback. With its new definition, this makes communicative language teaching related to form-focused instruction. This is because these two approaches are student-centered and concerned about how to use a language to communicate successful within meaningful contexts.

2.4 Form-Focused Instruction

Basically, form-focused instruction was derived from focus-on-form approach (FonF). Focus-on-form approach is different from focus-on-forms approach (FonFs) since the latter one includes a traditional grammar instruction (Long and Robinson, 1998). Meanwhile, focus-on-form approach emphasizes the beneficial aspects of incidental, explicit, and implicit language instruction (McGinnis, 2007). The role of attention in language learning is important in the focus-on-form approach since FonF techniques are intended to create or increase the ability of students to detect and notice the use of L2 forms in particular contexts (Long and Robinson, 1998: 23). It integrates form and meaning by drawing the students' attention to specific linguistic forms within meaningful contexts whereas in focus-on-forms approach, students need to focus on linguistic forms in isolation, and such forms should be taught one by one (Doughty and Williams, 1998).

Long (1997) claims that when comparing focus-on-form approach with focus-on-forms approach, it is worth using focus-on-form approach to teach the target language since focus-on-forms approach has some problems that may interrupt success in language learning. First, focus-on-forms approach is teacher-directed without emphasis in conducting needs analysis to identify the students' communicative needs, styles, and preferences. Second, both lexical and grammatical features taught in focus-on-forms approach resulting in pedagogic materials, like textbook dialogs are artificial and simplified versions of language use. Third, focus-on-forms approach seems to emphasize discrete linguistic elements but ignore language learning process. It usually tends to result in decrease in motivation, attention, and student enrollments. Fourth, focus-on-forms approach is restricted teaching on discrete points of grammar in isolation without any references to meaning. On the contrary, focus-on-form approach in second language teaching attempts to overtly draw students' attention to linguistic elements as they arise spontaneously in lessons with the focus on meaning and communication (Long, 1991). Focus-on-form approach integrates attention to form, meaning, and use together (Doughty and Williams, 1998). The main advantage of such integration is that students will have more opportunities to negotiate the meaning in their L2. According to Norris and Ortega (2000), in focus-on-form approach, tasks are designed to promote learner engagement with meaning prior to form and nature of the

L2 forms. The instruction is unobtrusive and promotes student mental processes. The target forms arise from analysis of students' needs. The teacher needs to consider interlanguage constraints when selecting the target forms of instruction. In contrast, in focus-on-forms approach, the target forms are presented to students from the teacher basis without any learner engagement with meaning and context.

For the treatments that can be used in the focus-on-form course, Thibeau (2007) claims that there are many treatments of the focus-on-form approach that allow the teachers to choose from, ranging from explicit, obtrusive techniques to unobtrusive techniques. Explicit, traditional rule explanation at one end of the continuum is full intrusion. It entirely devotes students' attentional resources to process for forms. At the opposite side without intrusion, the Natural Approach devotes all the students' resources to process for meaning. For focus-on-form techniques at the less intrusive end, like Input Flood and Input Enhancement, these two techniques try to increase the students' ability to notice the forms in the input within a sufficient condition for creating a preliminary interlanguage rule. Input Enhance attempts to direct students' attention to a particular form through italics, bolding, underlining, using visual equivalent of stress and emphasis, or enlarging the target forms in a written/spoken input (Sharwood-Smith, 1981). Along the continuum, there is another attention-directing option called Grammar Consciousness Raising. It is one of the most obtrusive focus-on-form techniques that emphasize the necessity of conscious noticing of the target language grammar or the gap between the interlanguage rule and the target language rule (Sharwood-Smith, 1981). In Grammar Consciousness Raising, students are provided with input and activities which have the attempt to create awareness of the target forms. However, when using this teaching method, students are not required to produce the forms accurately before their internal syllabi will lead them to the development point (Sharwood-Smith, 1981).
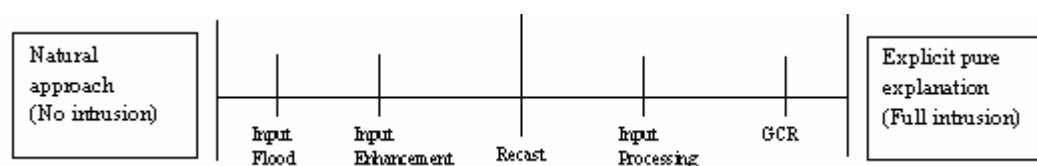
Figure 2.1: Intrusiveness Continuum

(Thibeau, 2007)

Regarding the definitions of focus-on-form approach again, it was found that its definitions and the way to implement this approach in research vary among researchers. Based on the original definition of focus-on-form approach proposed by Long (1991), focus on form occurs in meaning-centered discourse; it is observable and occurs interactionally in meaningful contexts; it is incidental and not predetermined; and it is transitory, extensive and aims to draw students' attention to several different linguistic forms within communicative contexts. In many of the previous studies in an edited volume by Doughty and Williams (1998), it was found that focus-on-form approach has not always been used incidentally which contrasts with the original definitions of Long (1991). In a study of Williams and Evans (1998), for example, it was found that their focus-on-form instruction approach was preplanned. They had preselected two forms (the participial adjectives and the passive) before they provided their students with intensive form-focused instruction, a branch of focus-on-form approach, which is a treatment that allows both incidental and preplanned ways.

According to Spada (1997), the term form-focused instruction (FFI) is based on types of instruction that correspond with the idea of attention in learning in the target language. Spada (1997) claims that there are a few differences between the broader approach, focus-on-form approach and its new branch, form-focused instruction. This is because focus-on-form approach is quite limited to meaning-based pedagogical events when attention is drawn to language spontaneously rather than in preplanned ways. Meanwhile, form-focused instruction refers to pedagogical events that are also presented within meaning-based approaches to the target language instruction, but it allows the teachers to choose either spontaneous or predetermined ways in their teaching (Spada, 1997). Many studies have shown evidence that form-focused instruction corresponds with more acquisition of new grammar and vocabulary than nonform-focused instruction. In the study conducted by Ellis, Basturkmen, and Loewen (2001), it was found that the students who engaged in form-focused and communicative activities improved their grammatical accuracy. Furthermore, Loewen (2002) found that short episodes of corrective feedback, one of the form-focused techniques, resulted in higher rates of correctness on subsequent tests. In addition, many studies have showed that various form-focused techniques have brought about more accurate use of target language forms (Doughty and Verela,

1998; Jourdenais, Ota, Stauffer, Boyson, and Doughty, 1995). Moreover, based on the results from a large review of literature on the needs of English language students, it was found that students learned with the best outcome with the teaching method that mixed interactive approaches with explicit teaching (Goldenberg, 2008).

Regarding explicit teaching in form-focused instruction, it is believed that explicit instruction can facilitate implicit L2 knowledge in two principal ways (Pica, 1994). First, it enhances students' abilities to notice linguistic properties of the input of the language. Second, the instruction also helps students obtain intake which includes the way to process grammatical information for short term or medium-term memory (Pica, 1994). Ellis (2002a) advocates that when explicit instruction is sustained over a long period of time, it can promote the development of implicit knowledge which can be measured by students' performance in free production tasks. This is because the instruction promotes accuracy in the use of difficult forms. He adds that in the classroom that uses communicative tasks, the teacher needs to include explicit instruction since a combination of form-focused instruction using explicit teaching and meaningful communication can bring about success in higher learning proficiency of the target language (Ellis, 2001, 2002b, 2003).

From previous studies, when compared with implicit grammar instruction, in a recent meta-analysis of 49 studies on the effectiveness of L2 instruction done by Norris and Ortega (2000), it was found that the explicit instruction has proven more useful than the implicit instruction. The explicit instruction (the instruction that presents the language structure, describes, and exemplifies the rules for the students to make use in various sentences) results in substantial gains in the learning of target grammatical items more than the implicit one which only consists of communicative exposure to the target form (Norris and Ortega, 2000). In another research, Wee, Sim, and Jusoff (2009) found that explicit instruction emphasizing grammatical features of the target language should be included in the writing class. In the classroom, the teacher could provide overt corrective feedback by supplying explicit explanation for the errors made by the students. The teacher drew the students' attention to the grammatical items so that they could acquire such items and apply to use in their writing work (Wee, Sim, and Jusoff, 2009). Hulstijn and Hulstijn (1984) found that the students who received explicit instruction made fewer errors in their writing. They

noted that focus on attention to grammatical items had a significant effect on the students' performance. In another study of 300 native German speakers who had been studying ESL for three to 12 years, Green and Hecht (1992) found that the students who had received the most explicit instruction identified the correct rule 85% of the time. This result seemed to shed light on the benefit of explicit instruction toward the development of writing skills since the reduction of errors as well as the ability to identify grammatical rules can bring about better writing ability. Furthermore, Pica (1985, 1994) found that the students who received explicit instruction produced more accurate sentences than those without such instruction. The results of her study in 1985 showed that the instructed students produced more accurate plural "–s" than the uninstructed students since the latter group usually used a strategy of attaching quantifiers rather than adding "–s" to their nouns like in the sentences "three book" or "a few house" (Pica, 1985).

However, even though several studies have proven that explicit instruction not only improves grammatical competence and writing ability but also reduce students' errors, there are also some researchers who found that this type of instruction was useless and had no significant connection to writing ability. In one study of Japanese students, for example, it was found that grammar correction on students' essays did not help them improve their writing ability. This is because they still made the same errors in follow-up writing assignments. They gave some reasons to explain why grammar correction was proven unsuccessful in teaching writing. First, grammar correction accounted for only the surface appearance of grammar without specific focus on language development. Second, language and grammar acquisition occurred developmentally and hierarchically; therefore, when students were given a correction for a grammatical feature in which they were not familiar with, it would serve no essentials at all in their writing. Third, the understanding of grammar varied between the teacher and his/her students. The teacher could misinterpret the students' writing that caused him/her to provide grammar correction from the misinterpretation whereas the students found the teacher's correction too complex to understand. Finally, through explicit instruction, students had opportunities to learn only corrections they understood so when they had to write again in a follow-up paper, they could not incorporate such corrections into their paper (Robb, Ross, and Shortreed, 1986).

Furthermore, based on a review of 53 experimental studies conducted by Tordoir and Wesdorp (1979) on the effects of different approaches on writing composition, it was found that practice in writing and reading was superior to explicit instruction. In addition, a meta-analysis of 39 studies of Hillocks (1984) revealed that traditional school grammar, such as the definition of parts of speech, had no effect on increase in the students' writing ability.

In other words, although both positive and negative results of explicit instruction in the writing class are reported, it is not yet conclusive that such instruction should or should not be included in the classrooms without any experiments. According to Whinney (1997), explicit instruction does not always lead to explicit learning if the instruction is confusing and the rules are too complex. To handle this problem, the teacher needs to know whether explicit teaching leads students to acquisition of explicit rule formulation. S/he also needs to know whether explicit rule formulation that the students have learned leads to higher levels of learning achievement. In addition, another factor that leads the students to become successful or unsuccessful in writing ability is their age. To support this belief, Celce-Murcia (1991) points out that explicit grammar instruction can be used with adolescent or adult students with more effective results than younger students.

Drawing attention back to form-focused instruction that puts emphasis on learning the target language through form and meaning with references to context, explicit instruction should be taught accompanying meaningful contexts. Celce-Murcia (1992) and Batstone (1994: 11) suggest that grammatical items should be taught explicitly with reference to meanings, social factors, or discourse in specific contexts because grammar is a communicative device that is functionally motivated. Schleppegrell (1998) advocates that several grammatical systems, like conjunctions, references, and tenses can enable a text to show some particular kinds of meanings that have their own functions in particular contexts. Larsen-Freeman (1991) claims that form, meaning, and function are three interacting dimensions in language. Therefore, in the classroom, the teacher needs to decide which dimension the students are experiencing with so that s/he can provide the right instruction for them. Apart from this, it is believed that the presentation of explicit instruction on grammatical features in meaningful contexts has advantages over the traditional approach since

such contextualized method delivers information meaningfully to students while they are learning the target language (Azar, 2006). In scientific texts, for example, Halliday and Martin (1993) claim that the grammatical organization of scientific texts is functional for deriving the meanings that the texts express and the grammatical features, such as noun compounding, expansion of noun phrases, and nominalization are required for studying (Halliday and Martin, 1993). Herrero (2005) states that grammar points, such as subject-verb agreement, subject omission, indirect questions, various forms of "other", the article "the," prepositions, word choice, verb forms, and tenses should be included in meaningful contexts. This is because lack of the knowledge in these grammatical features can cause students a lot of problems in writing.

In short, form-focused instruction not only emphasizes the teaching of form and meaning in context but also allows the teacher to choose either spontaneous or predetermined directions. The students' attention is drawn to linguistic elements that arise in meaningful contexts. For the treatments, it was found that form-focused instruction can be used with either implicit or explicit instruction; however, it seems that the latter has been proven more successful than the former one. Implicit teaching usually leaves students with uncorrected forms whereas learning through explicit teaching; they can have full explanations concerning about the use of the target language's forms. In addition, since this approach focuses on teaching form and meaning in context, the topics or themes chosen and used as the context for students need to be relevant to their needs. This is because relevant topics/themes can bring about the achievement of both language and content courses (Herrero, 2005).

2.5 Theme-Based Model

Theme-based model (also named topic-based approach) is one of the three models of content-based instructional models (theme-based model, sheltered model, and adjunct model) (Brinton et al., 1989). All these models use content as a focus in designing a curriculum and aim to expose students to a second language environment by using the subject matter as the content of language learning (Wesche and Skehan, 2002). Referring to the differences, the theme-based model aims at helping students develop competence in the target language using a specific topic area with a focus on

language skills and functions whereas the sheltered model and the adjunct model focus on content mastery. Moreover, the theme-based model can be used in a language course by a language teacher while the other two need an institutional framework or a large cooperation between a language teacher and a content specialist (Brinton et al., 1989). The following table of Brinton et al. (1989) explains briefly about primary purposes, instructional format, student population, instructional responsibilities, and focus of education of these three content-based instructional models.

Table 2.1: Comparing the Theme-Based Model with the Sheltered Model and the Adjunct Model

	Theme-based model	Sheltered model	Adjunct model
Primary purpose	1) Develop students' competence of the target language, using specific topic area	1) Help students master content in their subject areas	1) Help students master content in their subject areas 2)Introduce academic discourse to students and develop transferable academic skills
Instructional format	1) Language course	1) Require institutional framework	1) Require coordination between teachers of language and content courses
Student population	1) Non-native speakers	1) Non-native speakers	1) Language course: non-native speakers 2) Content course: native and non-native speakers
Instructional responsibilities	1) Language teacher	1) Content area specialist	1) Language teachers 2) Content area specialists
Focus of education	1) Language skills and functions	1) Content mastery	1) Content mastery

(Brinton et al., 1989)

The theme-based model differs from traditional language instruction since the language structures or items to be used in a syllabus of the whole course are determined by the theme or topic (Brinton, Snow, and Wesche, 2003). This teaching model has been transferred from general primary education to the teaching of English as a foreign language with the belief that this approach will be able to motivate students to use the target language in a meaningful context. This is because theme-based model integrates different areas of the curriculum together instead of teaching them separately (Cameron, 2001). Therefore, in a theme-based course, learning activities are integrated around meaningful contents (Berry and Mindes, 1993).

Regarding its benefits in language learning, the theme-based model helps students learn new vocabulary items more easily, provides a meaningful context for understanding, and promotes natural use of both written and spoken discourse types (Cameron, 2001). According to Masako (1996), first, the theme-based model is easy to use in a language classroom when comparing with the other two models (sheltered and adjunct models) in terms of cost and time preparation. The theme-based model allows language teachers to design curriculum, collect materials for teaching, and develop learning activities by their own. Moreover, if content specialists are available and language and content courses are well cooperated, a theme-based course can be further developed to be an adjunct instructional course. Second, the theme-based model can enhance communicative competence of students in the linguistics, socio-cultural, and strategic domains of the target language, while at the same time they are studying academic skills. It makes students be aware of using the target language as a means of learning. This means that they read, listen, speak, and write to learn instead of studying in order to read, listen, speak, and write. Brinton et al. (1989) advocates that a theme-based model can be applied to use in the course that promotes learning language in an integrated way. By doing this, the topic might be presented as a theme of the study through reading selection and then it can be revised during discussion. Audio- and videotaped materials that are related to the topic can provide the basis for listening activities. Finally, the teacher can assign students to do a writing assignment from the topic. During the class, the teacher needs to keep a balance between content from a theme or topic and the language skills the students are required to master through classroom activities. S/he needs to be certain that the language skills are practiced while the content in subject matters and activities can be directed by the students (Mumford, 2000). The teacher should also provide resources necessary for their study and teach the skills and strategies that students can use independently either individually or in group work.

Regarding theme-based lessons, Mumford (2000) suggests that the teacher should plan learning lessons with students. The theme or the topic may be chosen by the teacher or develop from the students' interest since they may have innovative ideas, resources, and strategies. Mumford (2000) believes that the theme-based lessons derived from the students' interests will be easier to meet individual needs, while at

the same time increasing their positive motivation in learning. Moreover, learning will become more meaningful when students have more opportunities to choose their methods and topics under study. Berry and Mindes (1993) and Howe et al. (1991) suggest that the theme chosen should be relevant to students' interests and topics taught in content subjects. This is because the content of the lessons that is relevant and interesting to students will make them try harder to understand, stay focused in their study, and have higher motivation (Brinton, Snow, and Wesche, 2003). The type of motivation that is needed for students in learning is intrinsic motivation. When their intrinsic motivation increases, students will be more likely to perform an activity by their personal interest and effective learning will be promoted (Hidi, 2000). As a result, the model of lifelong learning will be brought into the school setting. Such learning atmosphere will improve interpersonal relationships between teachers and students (Mumford, 2000). The role of teachers shifts from being lecturers to become coordinators or facilitators.

Since the theme-based model moves the focus from teacher centeredness to student centeredness, to plan a theme-based lesson, the teacher may have to work with other language teachers and/or content specialists or even discuss with their students. They can share thoughts, develop materials, and plan activities together. To plan a theme-based lesson that can lead to the best learning outcome, Mumford (2000) recommends the following four steps:

Step 1: Choose a theme/topic. The teacher needs to meet their team members that involve other language teachers, content specialists, or students in order to discuss and define a theme that will cover the whole lesson. To do so, brainstorming is required in this step in order to get new ideas. Then the teacher needs to refine one of the ideas that seems relevant to the students' needs and narrows it down to a proper size. The theme chosen must be relevant to and work well with the goal of the course.

Step 2: Plan ahead. The teacher develops a realistic plan based on the chosen theme. The plan includes objectives for curriculum areas, evaluation strategies, planning responsibilities (deciding which members of the team will plan for specific curriculum, etc.), a date for completion of planning, how to gather resources, kinds of activities, projects, and assignments, how to promote the community of assistance, and weekly planning templates of the lesson.

Step 3: Put the plan into action. When the teacher starts the lesson, s/he should be flexible since some ideas of some students may bring the teacher in an unexpected direction. The teacher should meet the team members regularly as the lesson progresses, and adjust the plan where necessary.

Step 4: Evaluate. Students' progress should be evaluated throughout the lesson. When the students complete the activities, the teacher needs to evaluate the success of the lesson by sharing ideas or problems with other colleagues, students, and community groups.

Regarding the usefulness of the theme-based model in language learning, from previous studies, it was found that the theme-based model can enhance students' language abilities. One quasi-experimental study carried out by Alptekin, Ercetin, and Bayyurt (2007) investigated the effectiveness of a theme-based syllabus and a grammatical syllabus for Turkish students of English in a primary school setting. The findings showed that EFL students who studied a theme-based syllabus developed better English listening, reading, and writing abilities. In a more recent study conducted by Yang (2009), it investigated the perceptions of students and the impact of a theme-based instruction on their level of interest in an English course for primary English as second language (ESL) students in Hong Kong. There were 88 participants. The data about their perceptions of the theme-based model and the opinions of the theme chosen for their study were collected from the students via the pre-and post-course questionnaires, and semi-structured interviews, and the course tutors from the questionnaires. From the results of the post-course questionnaire, it was found that the students' perceptions of the adoption of the theme-based model were very positive. Most of them (86%, 84%, and 86% respectively) agreed and strongly agreed that activities and tasks were more integrated and organized in the theme-based course (Mean = 3.00), learning the English language became more meaningful (Mean = 3.03), and a certain theme increased their vocabulary knowledge (Mean = 3.15). Similarly, the results of the interviews showed that the students' perceptions about the theme-based model were positive because this teaching model helped them learn the target language with more interesting feelings than teaching English grammar only. Based on the results of the study, the researcher suggests that the themes chosen for the courses should be appropriate for the competency levels, wants, and needs of the students as

well as be relevant to their real-life communication. Moreover, for future research, there should be a placement test administered to ascertain the current language level of the students before the course begins. There should be a post-test to evaluate the effectiveness of the course (Yang, 2009).

In short, when comparing with the sheltered model and the adjunct model, the theme-based model not only works well in the language classroom but also saves cost and time. This is because in the theme-based classroom, the teachers can manage a lesson by themselves even though there is no content specialist available for them. Moreover, this teaching model allows students to share their thoughts about the topics or themes to be taught in the classroom. In this sense, the theme-based model is included in this study. This is because the main concern of form-focused instruction is the teaching of form and meaning within context; therefore, the relevant theme/topics to the students' subject matters in sports science that will be used as the context in the form-focused instruction may be able to enhance language competence, like grammatical competence and writing ability.

2.6 Grammatical Competence

Newkirk (1978) defines the term "grammar" as a combination of contents (grammatical rules and terms) and methods (the memorization of the rules and definitions as well as sentence analysis). For the English grammar, Close (1981) points out that it is mainly a system of syntax that determines the order and patterns where words are placed in particular sentences. Furthermore, according to Crystal (1995), grammar is referred to as a branch of the description of language that deals with the way the words are combined to form sentences. Bolinger (1977: 4) claims that the term "grammar" stands for linguistic meanings that represent events in the real world. Leech (1983) advocates that a grammatical category can be divided into three levels which include syntactic, semantic, and pragmatic levels. First, the syntactic level, which is the most familiar level, refers to how to form sentences, such as negative sentences or clauses in English. Second, the semantic level refers to meanings behind the sentences, and for the last one, the pragmatic level refers to the context in which sentences are created. Leech (1983) also claims that grammar (formal system of language) and pragmatics (the principles of language use) are complementary domains

needed for studying because such domains have a connection with meaningful communication which is the nature of language (Leech, 1983).

From the above mentioned information, it can be said that grammatical competence has a relationship with various parts of language, such as conveying meanings behind particular contexts, reducing errors in language use, producing sentences properly, and supporting use of standard language. Regarding such roles, in the past, there were many types of grammar teaching methods developed for enhancing grammatical competence of students.

2.6.1 The Origin and Types of Grammar Instruction

Cook (1991) states that the knowledge of grammar depends on two components: (1) the principles which refer to the properties shared by all languages and (2) the parameters or the way in which the properties vary. It is believed that all natural languages are similar in some respects and humans can learn their first language as well as other languages in the same way. That is, learning the grammar of a second language is not just learning completely new structures or rules, but it is like how to discover and set the parameters of the new language.

Derived from the belief about the necessity of grammar instruction, a number of grammar teaching methods were introduced and raised as the issues for discussion about the effectiveness of grammar on students' language learning competence. Basically, the grammar teaching methods can be divided into two approaches: deductive and inductive approaches. The deductive approach can be called rule-driven learning or consciousness-raising approach since in such an approach, grammatical rules, principles, concepts, or theories are provided explicitly for students to memorize and apply for use in various sentences (Widodo, 2006). When students use the deductive approach, they reason from general to specific principles. To use the deductive approach successfully, Swan and Walter (1997) (cited in Thornbury, 1999: 32) provide some guidelines for teaching with this approach which includes the following:

1. The rules should be correct, simple, and relevant.

2. The rules should show explicitly the limitation on the use of a given form.

3. The rules need to make use of concepts which are familiar to the students.

Moreover, when the teacher presents grammatical rules to students, the rules should be illustrated with examples, be short, and involve students' comprehension as well as allowing them to have an opportunity to personalize the rules (Widodo, 2006).

In the classrooms, the teacher who employs the deductive approach can provide the sequence for organizing activities in by starting from presentation and practice that later on lead to production (PPP) (Ellis, 1993). With this sequence, the teacher starts with introducing new linguistic forms to students via a focused presentation which offers contextualization of the new forms, a deductive explanation of how it works, and some tightly controlled production activities (Ellis, 1993). After that, the students will be given practice activities which aim to develop their confidence with the new language. Lastly, during the production stage, there are freer practice activities which prompt the students to engage in meaningful exchanges through the tasks that elicit use of the target form.

As for the advantages of the deductive approach, Widodo (2006) points out that teaching with this approach is time-saving since it goes straightforwardly to the point. Several aspects of grammatical rules can be more clearly explained. A number of direct practice and application can be given to students immediately. Moreover, Widodo (2006) advocates that this approach respects the intelligence and maturity of adult students in particular as well as acknowledging the role of the cognitive process in language acquisition. More importantly, it supports analytical styles of many students in classroom learning. On the other hand, as for its disadvantages, it has been found that starting a lesson with a grammar presentation may obstruct learning, especially with younger students since they may not be able to understand the concepts behind the grammatical rules. Furthermore, grammar explanation seems to promote a teacher-centered classroom which may limit students' involvement and interaction. Moreover, it has been reported that the deductive approach encourages the belief that learning a language is just knowing and learning the rule (Widodo, 2006).

For the inductive approach, the instruction starts with observations, measurements, and data which lead students to learn rules, laws, concepts and theories implicitly (Felder and Henriques, 1995). The inductive approach emphasizes teaching grammatical rules implicitly in the sense that students are encouraged to discover and conclude the rules by themselves. Such an approach can also be called rule-discovery

learning since when learning with this approach, students need to observe a number of specific instances and then infer a general principle or concept behind the written or spoken texts. For the teacher, in the classrooms, s/he can start a lesson by presenting some examples of sentences which can be either spoken or written so that the students will be able to learn grammatical rules from such examples (Widodo, 2006).

As for the advantages of the inductive approach, Widodo (2006) points out that the inductive approach can enhance learning autonomy and self-reliance since the approach trains students to be familiar with rule discovery. It is believed that teaching with this approach, students' greater degree of cognitive depth is employed. The students are more active and easy to be motivated in the learning process. The approach includes students' pattern-recognition and problem-solving abilities in which they are interested in. They also have an opportunity for extra language practice if the problem-solving activity is done collaboratively. For its disadvantages, it was found that the inductive approach requires time and energy consuming in order to lead students to have understanding in a grammatical rule. With implicit instruction, the students may have the wrong concepts of the rule given by the teacher. The approach also requires time in planning a lesson. The teacher also needs to design data or materials taught in the classrooms carefully and systematically.

Regarding deductive and inductive approaches to second language acquisition (Widodo, 2006), the deductive approach is related to the conscious learning process since this approach focuses on error correction and the presentation of explicit rules (Krashen, 2002). It is usually exploited with adult students. Teaching with the deductive approach, the teacher teaches the rule explicitly to the students so that they can do the tasks given. It is believed that the explicit rule presentation can enhance the students' confidence in doing some tasks (Widodo, 2006). Meanwhile, the inductive approach is related to subconscious learning processes which are similar to the concept of language acquisition. With this approach, students can learn the system of a language, such as grammar or sentence rules implicitly in the same way as children acquire their first language whereas error correction and explicit teaching of the rules are not focused. In this approach, the students learn the grammatical rules unconsciously (Widodo, 2006).

Regarding the roles of deductive and inductive approaches in language teaching, there are many grammar teaching methods developed from them. Grammar Translation Method is the most deductive approach derived from the formal teaching of Latin and Greek influenced in Europe for many decades (Allen and Corder, 1975: 13; Rivers, 1968). This method emphasizes the translation of literary texts which are followed by explanation of grammatical rules in the students' native language. In terms of the inductive approach, the direct method represents the approach. In the classrooms taught with the direct method, the students are taught entirely in the target language and the grammatical aspects are taught inferentially and play a secondary role in oral communication (Allen and Corder, 1975: 18). More recently, for the audio-oral method, it combines the inductive approach (acquired verbal skills) with the deductive approach (learned reading and writing skills) (Allen and Corder, 1975). This method was influenced by behavioral psychology and structural linguistics where students learn by repeating structural patterns which are assisted by positive reinforcement provided by the teacher. For common instructional techniques, such as the silent way, the community language learning, the suggestopaedia, the total physical response, and the communicative approach, all of them focus on the inductive approach with some involvement of some deductive elements. This is because it is believed that language learning is an inductive process rather than a deductive process (Allen and Corder, 1975).

When comparing the deductive approach with the inductive approach, Hermann (1969) claims that the deductive approach is better for remembering rules while the inductive approach is better for transferring knowledge to new situations. Widodo (2006) advocates that some students achieve better in deductive language classes whereas the others learn better in inductive language classes. This is because individuals learn language with different styles and have different neurological mechanisms (Eisenstein, 1987). Eisenstein (1987) claims that whether grammatical rules are taught implicitly in the inductive approach or explicitly in the deductive approach depend on certain structures because some students are more capable of learning through the former approach, while others can learn best from the latter one. In short, both deductive and inductive approaches can be taught successfully depending on the cognitive style of the students as well as the grammatical items

presented (Brown, 2000; Eisenstein, 1987). Therefore, whether the teacher uses a deductive or inductive approach, s/he needs to consider the notion that language learning is a largely conscious process which includes formal exposure to rules and meanings which are followed by specific applications (Widodo, 2006).

In brief, grammar instruction can be divided into two main types: deductive approach (giving explicit explanation of some grammatical features) and inductive approach (having students make inferences about the use of grammatical rules from context). These teaching methods have both advantages and disadvantages. The deductive approach seems to work well with adolescent or adult students. It saves time since this approach directly points to the use of the rules and provides explicit instruction for students. For its disadvantages, it is believed that teaching with this approach may obstruct students' learning, especially with young students because it focuses more on accuracy than fluency. In terms of the inductive approach, it is believed that this approach directly leads to autonomous learning since it allows students to infer how to use some grammatical features from the context. For its disadvantages, this approach may lead to the wrong use of some grammatical features as a result of the lack of clear understanding in the rules.

2.6.2 Grammar in Language Teaching and Learning: Necessity of Grammar in Language Teaching and Learning

Grammar not only makes learners understand the conventions of standard English in terms of how sentences work together to create a meaningful text but also reduces vernacular or non standard English, such as using subjective pronouns in the place of objective pronouns "She loves I," the omission of certain preposition "I'm going school," the double negative form "I don't have nothing," and irregular verb form "I seen it." (Haussamen, Benjamin, Kolln, and Wheeler, 2003). Moreover, without grammatical knowledge, they may convey their thought in a wrong way. They may not be able to identify the difference between "She didn't go…" and "She doesn't go…" which is an important rule in communicative grammar (Haussamen, Benjamin, Kolln and Wheeler, 2003). On the other hand, if students are knowledgeable in grammar, they will be able to acquire a broad understanding in language variation because grammar helps students understand language patterns and know the relationship between their mother tongue and English. Haussamen, Benjamin, Kolln,

and Wheeler (2003) also suggest that in language teaching the non-native English students need to learn the meaning of a language associated with its grammatical structure.

Azar (2007) is another researcher who draws attention to grammar instruction. She believes that grammar is needed for comprehension of the nature of a language and if there wasn't grammar in language, we would have only individual words or sounds, pictures, and gestures to convey meanings (Azar, 2007). For students who experience grammar instruction, they usually have an advantage over those students who lack grammar (Azar, 2007). In the study of Generation 1.5 university students in the United States, Azar (2007) found that the students had difficulties in academic writing even though their speaking and listening were described as fluent. The students could not understand how a sentence was formed and how one sentence was related to one another in a paragraph. However, for students with good grammatical knowledge, they could understand meanings behind the sentence easily. They needed only a short explanation to understand the differences in meanings between "-ing" and "-ed" adjectives as in the sentences "I was really bored" and "I was really boring." (Azar, 2007).

To support the advantages of grammar in language teaching, GBT or Grammar-Based Teaching was developed as one of the grammar teaching approaches (Azar, 2007). The approach focuses on the integration of grammar teaching into language skills. The GBT is different from the Grammar Translation Method since there is neither translation nor rule memorization. The GBT method emphasizes learning grammar through communicative activities where grammar is integrated with a content or task-focused approach (Azar, 2007).It aims to help students develop communicative competence as well as comprehend grammar concepts which include subordination and coordination, expressing time relationship using verb forms, nouns and adjectives, subject-verb agreement, clauses, and phrases (Azar, 2007).

Since grammar helps students use language accurately, the development of grammar instruction may be needed as one of the aspects that the teacher has to think about carefully whenever it is added in any kinds of learning materials like the web-based course.

2.6.3 The Development of Grammar Instruction on Web-Based Instruction

As for the development of grammar instruction on web-based instruction, Pacheco (2005) provides the guidelines for creating a web site for teaching students English grammar as follows:

1. Contextualizing the new content through clear objectives and language functions and making notes where new structures are shown in contexts.

2. Presenting the structures with grammar charts and explanations.

3. Providing the listening part where students hear a variety of short conversations, interviews, storytelling, etc.

4. Providing a variety of short authentic passages, such as newspaper clippings that contain meaningful information (with pre-reading/while-reading/post-reading activities).

5. Having students experienced with writing where they can practice the new structures with the cues given.

6. Providing supplementary tasks and web links in order to enrich their previous practice in grammar, listening, reading, and writing.

7. Providing a self-test for students in order to see their progress in learning.

(Pacheco, 2005: 15-16).

Based on the above criteria in designing a web to teach grammar, Pacheco (2005) recommends NetGrammar (http://www,netgrammar.le.ucr.ac.cr) where students can practice new structures with other language skills, including listening, reading, and writing. Pacheco claims that it is a suitable website for self-directed learning because it helps students practice new structures in diverse contexts. NetGrammar also provides both controlled and communicative exercises to help students know how to use grammar in particular contexts.

With recognition of the features of grammar that can be integrated with other language skills, there are many websites designed to help language learners acquire English grammar. Here are some websites that offer advice to grammar problems (Allen, 2009) are displayed in Figure 2.2 below.

Websites and their Common Features
1. **Daily Grammar** http://www.dailygrammar.com **Common Features:** Offering grammar lesson for five days of the week, with a quiz the sixth.
2. **Garbage In, Garbage Out: Errors Caused by Over-Reliance on Spelling Checkers** http://www.wsu.edu:8080/~brians/errors/spellcheck.html **Common Features:** Showing a list of commonly confused words, usage errors, and "other strange words."
3. **Grammar and Style Notes** http://andromeda.rutgers.edu/~jlynch/Writing/ **Common Features:** Teaching grammatical rules and explanations, giving comments on style and usage.
4. **Guide to Grammar and Writing** http://grammar.ccc.commnet.edu/grammar/ **Common Features:**Providing basic grammar tips, hotline, interactive quizzes, quotes, links, FAQ, and more.
5. **Interesting Things for ESL Students** http://www.manythings.org **Common Features:** Providing grammar and interesting word-games
6. **Linguistic Fun Page** http://www.ojohaven.com/fun/ **Common Features:** Making links to references on grammatical use and misuse
7.**On Line English Grammar** http://www.edufind.com/english/grammar/index.cfm **Common Features:** Providing tips, exercises, a "grammar clinic," and practice pages
8. **Online English Phrase Checker** http://www.oleng.com.au/phrase-checker.html **Common Features:** Checking how to use a phrase or a word in contexts
9. **Rules for Using a Comma** http://www.writingenglish.com/comma.htm **Common Features:**Teaching punctuations such as comma, semicolon, apostrophe and more
10**. SharpWriter.com** http://www.sharpwriter.com **Common Features:** Offering links to dictionaries, grammar sources, punctuation information, thesauri, encyclopedias, genre resources, general writing resources, and more
11.**The Tongue Untied** http://www.grammaruntied.com/ **Common Features:** Teaching basic grammar, sentence structure and word choice, and rules for punctuation as well as practice exercises and quizzes

Figure 2.2: The Websites that Teach English Grammar

(Allen, 2009)

From the above information, it can be seen that there are many websites that the teachers can use as a model in developing their own. For grammar, as suggested by Pacheco (2005), grammar skills should be integrated with other language skills. Students need to have an opportunity to study grammar in particular contexts. The teacher can also have students work in some activities that develop their grammatical competence together with the four skills: listening, reading, writing, and speaking.

Learning grammar through web-based instruction allows students to study how to use some grammatical features in particular contexts. Besides gaining grammatical knowledge, students can learn cohesion and coherence of discourse and organization of the text at the same time, which is better than teaching the grammatical rules separately.

2.6.4 Assessing Grammatical Competence

Grammatical assessment is nothing new. In the past the knowledge of grammar was measured from the ability to recognize grammatical rules, to use the rules from samples of the target language, to give an accurate translation, to select grammatically correct answers from several options, to use grammatically appropriate sentences, and to provide judgments regarding the grammaticality of an utterance (Purpura, 2004). Nowadays, knowledge of grammar can be inferred from the ability to use grammar correctly with language skills, like reading, writing, listening and speaking the L2. However, the development of the tests used for assessing grammatical competence has many problems because it is difficult to decide (1) what constitutes grammatical knowledge, (2) what types of tasks can best allow teachers to determine that such grammatical knowledge has been measured, and (3) how to design tasks that can gain the data about grammatical knowledge from students for some specific assessment purpose alongside providing reliable and valid measures of performance (Purpura, 2004).

Regarding these problems, Purpura (2004) claims that assessing grammatical competence should be put together with the goals of instruction and grammatical analysis should be accompanied by application. Grammatical assessment should be measured based on the goals of instruction in order to get rid of the problems that the tests do not measure what they are expected to measure. By doing this, grammatical knowledge can be assessed by having students recognize rules, analyze texts, and translate texts in the same way they have to do when studying in class (Purpura, 2004). Another important point is that grammatical analysis should be accompanied by application (Pupura, 2004). The tests should offer opportunities for students to use their grammatical knowledge to answer questions, write illustrative examples, combine sentences, correct errors, and write paragraphs and so forth.

In conclusion, to assess grammatical competence of students, teachers and test developers need to think about what constitutes grammatical knowledge, types of test tasks that can obtain the data about grammatical knowledge of students in accordance with providing reliable and valid measures of performance. Moreover, grammatical assessment needs to be related to the goals of instruction in the classrooms in order to

get rid of the problems that the tests do not measure what they are expected to measure.

2.7 Writing Ability

Writing is needed in most contexts of life, such as school, the workplace, and the community (Graham and Perin, 2007). Graham and Perin (2007) point out that writing ability of students can make a prediction about their academic success as well as be a fundamental requirement for participating in daily routine. To support this claim, based on the recent reports of the National Commission on Writing (2004, 2005), most of public and private employees in the workplace needed to develop their writing ability since it directly influenced hiring decisions. The National Commission on Writing also reported that 30% of government and private sector employees needed basic writing skills as part of their job training.

In education, writing ability plays two significant roles toward students learning. First, it is a skill that encourages the use of strategies, such as planning, evaluating, and revising texts (Keys, 2000; Shanahan, 2004; Sperling and Freedman, 2001). Such strategies aim to help students achieve a variety of learning goals like writing a report or expressing their opinions. Second, writing ability is another way used in modifying knowledge of students, especially for learning other subjects or fields (Keys, 2000; Shanahan, 2004; Sperling and Freedman, 2001). For the problems derived from the lack of sufficient writing ability toward studying, even in the native English speaking country like in the United States, there are still problems with a large numbers of adolescents graduate from high schools (Graham and Perin, 2007). Such group of students cannot write at the basic level which is required by colleges or employers (Graham and Perin, 2007). Besides, it has been found that many young people who drop out of high school have problems in the basic literary skills required in the school curriculum (Graham and Perin, 2007; Kamil, 2003; Snow and Biancarosa, 2003). Moreover, according to the National Assessment of Educational Progress (NAEP) writing exams (2002) which measured the levels of writing ability of 4th, 8th, and 12th graders, there were only few students who could write at the advanced level (Persky, Daane, and Jin, 2003). The data showed that 15 % of 4th and 8th graders and 26 % of 12th graders' writing levels were below the basic level.

Regarding the needs to develop students' writing ability, Graham and Perin (2007) recommend "Eleven Elements of Effective Adolescent Writing Instruction" which can assist adolescent students in learning to write properly as well as use writing as a tool for learning other subject areas. The elements are listed as follows:

1. *Writing Strategies*. Teachers teach students the strategies used for planning, revising, and editing their writing work.

2. *Summarization*. Teachers explicitly teach students how to summarize written texts.

3. *Collaborative Writing*. Students are encouraged to plan, draft, revise, and edit their writing work.

4. *Specific Product Goals*. Students are given specific, reachable goals for the writing assigned.

5. *Word Processing*. Students are encouraged to use computer, word processors, and some other alternative tools like web-based learning courses in accordance with their writing assignments.

6. *Sentence Combining*. Teachers teach students how to make more complex sentences.

7. *Prewriting*. Students are encouraged to do activities designed to help them organize ideas in their writing work.

8. *Inquiry Activities*. Students are encouraged to analyze immediate, concrete data to help themselves develop ideas as well as content for some writing tasks.

9. *Process Writing Approach*. Teachers create a workshop environment where students have opportunities to write for authentic audiences and personalized instruction.

10. *Study of Models*. Teachers provide models of good writing for students to read, analyze, and emulate.

11. *Writing for Content Learning*. Students use their writing ability as a tool for learning other content areas.

Since writing ability is needed by students as an important tool to study a language and other content matters, the teacher can help students develop their writing ability as required in the curriculum by specifying what level of writing ability the

students are required to master. To illustrate this, ACTFL (2009) classifies writing ability into the following ten levels:

1. Superior. Writers at the Superior level can create both kinds of formal and informal correspondence, complex summaries, reports, précis, and research papers abstractly and concretely.

2. *Advanced-High.* Writers at the advanced-high level can write summaries, reports, précis, and research papers with only concrete aspects of such topics. They may have difficulty with the topics which are related to abstract, global, or impersonal terms.

3. *Advanced-Mid.* Writers at the advanced-mid level can write with good organization and cohesiveness. They can write in the topics relating to their interests. They are also good at using common word order patterns, coordination, and subordination. However, they may make some errors in complex sentences.

4. *Advanced-Low.* The ability of writers at the advanced-low level can meet basic academic writing needs. They can write in their familiar topics by means of narratives and descriptions. They can combine and connect sentences into a paragraph. However, their writing styles may get influences from their first language and have some spelling, punctuation, grammar, and vocabulary errors.

5. *Intermediate-High.* The ability of writers at the intermediate-high level can meet all practical writing needs which include taking notes on familiar topics, writing uncomplicated letters, simple summaries, and compositions related to work, school experiences, and topics of their interest. They can make sentence connection in a paragraph. However, they may have difficulty in paraphrasing which requires clarity.

6. *Intermediate-Mid.* Writers at the intermediate-mid level can write simple compositions, descriptions, and requests relating to their personal experiences. They can write only non-complex sentences and use appropriate verb forms in sentences.

7. *Intermediate-Low.* Writers at the intermediate-low level can produce statements and formulate questions. Most of the sentences are short and simple conversational-style with the basic subject-verb-object word order pattern.

8. *Novice-High.* Writers at the novice-high level can make lists and short messages to express their thoughts. They can use learned vocabulary as well as

structures to make simple sentences on very familiar topics, but their sentences may be partially communicative.

9. *Novice-Mid*. Writers at the novice-mid level can copy or transcribe familiar words or phrases, and then reproduce such words and phrases in simple forms. They know some categories of vocabulary, such as names, numbers, and nationality.

10. *Novice-Low*. Writers at the novice-low level can produce very limited number of isolated words, but there can be many errors.

It can be said that writing ability is necessary for developing other language skills as well as strategies like planning, evaluating, and revising texts which are needed for hiring decision. Regarding the importance of writing ability both in education and future profession, the teacher can use many types of writing instruction to help students achieve the level of writing ability as stated in the course.

2.7.1 Writing Instruction

According to previous studies, there are many factors and types of writing instruction considered necessary for the improvement of writing abilities of students. The components of effective writing instruction, for example, are regarded by many researchers about their necessity for the improvement of writing abilities of students (Boersma, Dye, Hartmann, Herbert, Walsh 1997; Chircop 2005; Coe et al. 1999; Cotton 1988, Cowie 1995). The components include practice, effective and timely feedback described below:

1. Practice. Many studies have found that writing abilities of the students are related to the amount of writing (Boersma, Dye, Hartmann, Herbert, Walsh, 1997; Chircop, 2005; Coe et al., 1999; Cotton, 1988). Chircop (2005) claims that the intensive programs that need the students to have multiple draft of writing (i.e. portfolios, journal writing, diaries, and computer software) are determined effective for the improvement of the students' writing abilities as well as their writing aptitude. Boersma, Dye, Hartmann, Herbert, and Walsh (1997) agree that to help students write with the best outcomes, the teachers should offer them daily opportunities to write from their real-life situations.

2. Effective and Timely Feedback. Timely feedback received in response to student writing is another important component of effective writing instruction (Cowie, 1995). Cotton (1988) and Cowie (1995) advocate that timely feedback has a

positive effect on the quality of writing work. From their studies, it was found that most of the students considered the feedback to their writing as effective for their writing abilities (Cotton, 1988; Cowie, 1995). Peer review and evaluation in immediate feedback is also the procedures that are regarded advantageous for improving the students' writing abilities. Cotton (1998) adds that with such immediate feedback, the students can receive punctual and clear feedback that can assist them in correcting some errors of their writing work.

Adding to the aforementioned information, there are many researchers and organizations that provide some valuable recommendations for writing instruction (Graham, 2006; Graham and Harris, 2005; Graham and Perin, 2007a, 2007b; Harris, Graham, Mason, and Freidlander, 2008; Rogers and Graham, in press; National Commission on Writing, 2003). The recommendations are as follows:

Recommendation 1. Dedicating time to writing and involving students in various forms of writing

Graham and Perin (200b) recommend that to be proficient writers, students need have at least one or more hours a day to practice their writing. The teachers can dedicate time to teach them how to write with multiple purposes, such as writing from content materials (i.e. learning logs, journal entries); reflecting about self (i.e. autobiography); communicating with others (i.e. personal and business letters, electronic mails); informing others (i.e. writing reports); persuading others (i.e. showing opinions about a controversial issue); entertaining others (i.e. writing short stories); responding to literature (i.e. criticizing characters); and demonstrating knowledge (i.e. traditional classroom tests, high-stakes tests that include writing parts).

Recommendation 2. Increasing students' knowledge about writing

Graham and Perin (2007a) state that reading is another way that can increase knowledge about writing since it provides a good chance for students to learn how to write from many authors who may have different purposes and forms of writing. For example, when students read an autobiography, they may be able to notice how the writer presents him/herself through words and sentences. They can see how the writer uses words to show feelings, make sentences in response to the flow of text, organize ideas, and use illustrations to reinforce the reader's comprehension. The teacher can

also engage students in a discussion about the intentions of the writer, and then assign writing work that allows them to apply what they have read to their own writing.

Recommendation 3. Enhancing interest, enjoyment, and motivation of students

Graham and Perin (2007b) claim that in order to increase students' interest in writing, it is necessary to have writing assignments that serve a real or meaningful purpose, such as writing a letter to a real person. To enhance their enjoyment and motivation in writing, the classroom environment should be supportive for them. The teacher needs to provide enough support when they need help to improve their writing, at the same time encourage them to write as much as they can on their own. Also, they should have opportunities to work collaboratively in groups where they can help each other to plan, draft, revise, and edit their work (Graham and Perin, 2007b).

Recommendation 4. Helping students become strategic writers

The teacher can encourage students to use multiple strategies in writing from simple strategies, such as brainstorming and semantic webbing to more complex ones, like writing reports (Graham and Harris, 2005; Harris, Graham, Mason, and Freidlander, 2008). Graham and Perin (2007a) and Rogers and Graham (in press) provide useful methods for teaching writing strategies as follows:

1. Describe the writing strategy and its purpose for learning

2. Tell them when and how they can use the strategy

3. Assign them to apply the strategy to use in their writing tasks, giving assistance when necessary

4. Keep teaching them how to use the strategy until they can use it on their own.

5. Encourage them to use the strategy in real-life situations, like in the high-stake tests that include writing

6. Ask them to evaluate the advantages of the strategy toward their writing improvement

Recommendation 5. Teaching basic writing skills to mastery

Graham (2006) advocates that basic writing skills, such as handwriting or typing, spelling, punctuation, and capitalization skills need to be taught in the classrooms in order not only to reduce time for checking the writing work but also avoid mistakes in writing.

Recommendation 6. Taking advantage of technological writing tools

According to the National Commission on Writing (2004), it suggests to include technologies in teaching and learning writing since they seem to have the potentially positive effects on writing. Students can use the technology like the Internet to learn how to write from authentic materials. They also have various choices to study from a large number of websites. For word processing, they can use the program to edit their work. In addition, based on the results of the long-term trend assessment in the U.S., the data showed that the use of computers for writing increased dramatically between 1984 and 1996, and by 1996, it was found that over 90% of students used computers for writing stories or papers (National Commission of Writing, 2004). Moreover, in 2002, it was found that nearly 60% of students at Grade 8 reported that they used the Internet to collect information for their writing assignments almost all the time, and 47% of them used the computer to edit their drafts, such as spell checking and cut-and-paste papers (National Commission of Writing, 2004). For Grade 12 students, the use of the Internet increased to 67%, and 71% of them reported that they used word processing tools to edit their drafts for writing assignments papers (National Commission of Writing, 2004).

Recommendation 7. Using assessment to measure progress and needs of students

Assessment in writing can tell the teacher about the successfulness of the writing program, whether or not it needs to be adjusted to be appropriate for needs and levels of students. To access the quality of writing work of students, Graham and Perin (2007b) suggest the following questions needed to mention when the teacher needs to access the students' writing:

1. Do they show clearly presented and fully developed ideas?

2. Do they write with well-organized and easy to follow paragraphs?

3. Are words used precisely?

4. Do they use various sentences in the text to promote fluency, rhythm, and natural speech patterns?

5. Do their pieces of writing show appropriate tone to make maximum impact on the reader?

6. Are there any spelling and grammar errors?

7. Are their pieces of writing legible, attractive, and accessible for the reader?

(Graham and Perin, 2007b)

In conclusion, there are many types of writing instruction that the teacher can apply to use in the classrooms. S/he can assign students to practice writing skills from various pieces of writing (i.e. portfolios, journal writing, and diaries) and give timely feedback when necessary. Before writing, the teacher can assign them to read content in order to increase their interest, enjoyment, and motivation. The teacher should teach basic writing skills and strategies for students in order to help them write fluently and accurately. Students also need to dedicate time for their own writing. They may access technological writing tools like web-based instruction that not only develops writing ability but also allows them to study the language at their convenience.

2.7.2 Teaching Writing on Web-Based Language Learning Instruction

According to Oxford (2006), technology like the Internet can be used to support writing instruction for teachers and students since the Internet provides rich, authentic, and current information. Moreover, when learning a language on the Internet, students are allowed to study under colorful visual elements. This learning style can enhance flexibility learning pace, reinforce learning of the subject matter, as well as increase motivation and interest of students (Chuo, 2007). As some evidence, comparative studies conducted by Ghaleb (1993), Sullivan and Pratt (1996), Braine (1997), and Liou (1997) showed that web-based language instruction could enhance students' writing quality and writing quantity far more than traditional classroom instruction. The web-based language instruction was considered as an effective tool for students to improve their language skills in general as well as developing specific language skills concerning reading, speaking, and writing (Frizler, 1995; Osuna and Meskill, 1998; Stepp-Greany, 2002). In addition, the findings obtained from teacher evaluation of web-based language activities revealed that students received more advantages than disadvantageous from the use of the Internet resources (Aida, 1995; Mak and Mak, 1995; Shetzer, 1995; St. John, 1995). Apart from this, the findings from many empirical studies revealed that students usually had an overall positive attitude toward learning in web-environment and computer-assisted language learning environment (Felix, 2001; Liou; 1997; Osuna and Meskill, 1998; Shen, 1999).

To shed light on the popularity and usefulness of the web-based language instruction toward the teaching of writing, a number of previous studies have shown that web-based language instruction tools have been introduced and used widely for teaching writing in various forms, such as weblogs, WebQuest Model, etc. (Chuo,2007). Weblog or blog, for example, is one of the newest Internet learning tools which can be used for writing instruction (Eastment, 2005). The term "weblog" refers to "online diaries" or "logs of thoughts" which provide space for students to write from what they have read (Eastment, 2005). According to Eastment (2005), it is a personalized web page kept in a diary form like a "log on the web" which is kept on a static web page or a database-backed website enabled via "blogging" software. One reason that makes weblogs become one of the most effective tools in teaching writing is that it is directly related to writing beyond the traditional classroom (Simsek, 2009). Weblogs also promote communicative, cognitive, and sociocognitive views of language instruction which has a significant influence on writing ability (Wright, Knight, and Pomerleau, 1999). Ward (2004) claims that weblog can fulfill the needs to develop writing instruction. It provides a genuine audience but is authentically communicative. For example, to create a learner blog, the teacher can use the weblog in all writing stages from drafting to publishing and assessment (Ward, 2004). At the drafting stage, students can exchange their writings via blog pages. During this stage, the teacher can reach the drafts at anytime anywhere. This allows them to give feedback more easily. There will be no time restriction, so other peers of students can review the drafts as long as they want (Ward, 2004). Besides the reviews of their peers, students can see the feedback of other students given by the teacher. They can see good writing of their friends and make use of it to improve their own. Moreover, the opportunities offered by the weblogs go beyond the teacher and peer feedback. It allows other people on the web to view their pieces of writing and give some comments (Simsek, 2009). Such typical quality of the weblog makes students write with the awareness that anyone can see their writings. They will be more careful when they are writing. They can get various comments that they can use to improve their writing. Simsek (2009) points out that if the students know that their writings will be read by someone other than the teacher or friends, they will make more meaningful and successful texts. Most importantly, weblogs can increase the students' awareness

of the process-driven nature of writing (Ward, 2004). Weblogs can play the role of an online diary. It has been promoted as an alternative assessment in writing classrooms for both native speakers and second language students (Barrios, 2003; Campbell, 2003; Ward, 2004; Johnson, 2004; Pinkman, 2005). As another piece of evidence, in a recent study of 70 undergraduate students in the Department of Primary Education at Marmara University in Turkey, it was found that the weblog integrated writing instruction improved the students' writing ability at a significant level (Simsek, 2009). The students also had an overall positive attitude toward the use of the weblog in teaching writing. Moreover, it had proven more effective in teaching writing than the traditional classroom instruction (Simsek, 2009).

Regarding the use of weblogs in language instruction, Canpbell (2003) describes how to integrate weblogs into educational contexts at the same time introducing three types of blogs that are useful for students. The first type is devoted to tutor blogs. To promote the use of tutor blogs in language learning, the teacher can encourage students to deal with English websites and guide them in their self-study by making some online activities, such as quizzes, audio and video files, English news sites, key-pal networks, and interactive websites (Campbell, 2003). The second type is learner blogs. Campbell (2003) suggests that learner blogs are suitable for use in reading and writing classes. Especially for writing, learner blogs can be used as journals for writing practice. This type of weblogs allows students to have writing practice, develop a sense of ownership at the same time experiencing the hypertext documents. Moreover, their writing work can instantly be read by anyone else so that students can get valuable comments and ideas from others (Farmer, 2006). For the last type of weblog, it is a class blog. This type of weblog allows students to work collaboratively like they do with other students in the classroom. It is like a bulletin board for students to share ideas on a common topic (Campbell, 2003).

Another web-based language learning tool that has also gained popularity in teaching writing is WebQuest. WebQuest is a potential tool which is proven effective for web-based language instruction (Chuo, 2007). In the study carried out by Chuo (2007), the Web-Quest model to EFL writing was applied to teach writing. It was named "WebQuest Writing Instruction" (WQWI) (Chuo, 2007). The study investigated the effects of the WebQuest Writing Instruction toward Taiwanese EFL

students' writing proficiency, writing appreciation, and perception of the web-resource integrated language learning. The participants of the study were 108 second-year students of two intact classes in a junior college. One class received the WQWI program, while the other received traditional classroom writing instruction. During the experiment, at the pre-writing stage, the students were given a description of a lesson and a task locating some problems. Next, they were assigned to search the answers for the task from Internet resources. During the writing stage, the students had to analyze and synthesize the information they had searched from the Internet, and then they had to include the information into their written assignments. Finally, at the post-writing stage, their written assignments were reviewed and revised with their peers on the web where they could exchange ideas and discuss their writing. The results of the study showed that the students in the WQWI class showed improvement in their writing proficiency more significantly than those in the traditional classroom writing instruction. The students in the WQWI class also had significant reduction in writing apprehension, but between the two classes there was no significant difference in reduced apprehension. Moreover, the students in the WQWI class had an overall positive attitude toward the WQWI program since they claimed that they received more advantages than disadvantages from this program (Chuo, 2007). Based on the findings, Chuo (2007) concluded that web resources should be integrated into EFL writing instruction because the WebQuest model could enhance students' writing proficiency as well as provide a positive learning experience.

Besides the use of the weblogs and WebQuest model in teaching writing, there are some other web-based language learning tools which are proven successful for teaching writing. A CALL-based EFL program on the web is another example. In a study of 21 fourth-year private university students in western Japan, the students' gains in writing fluency were determined by considering the number of words and word frequency levels after they had enrolled in a seven-day intensive CALL-based EFL program (Fellner and Apple, 2006). During studying in the program, the students were exposed to a variety of CALL tasks, such as a web listening, reading, and vocabulary building. They also posted emails to the class free writing blog. The findings showed that based on a simple word count of the students' blog entries, there was an increase in the number of words produced. Moreover, the average word count

for student email postings to the class blog increased. On the first day, there were an average of 31.5 words, while on the last day of the program, the number reached an average of 121.9 words. Such improvement represented an overall increase of nearly 350% in word count (Fellner and Apple, 2006).

It can be said that besides being given the opportunity to learn from authentic texts, students can exchange thoughts and get some useful comments from other users, all of which are useful for developing their own writing skills. Since they know that there will be other people who can view their writing, this makes them more enthusiastic and careful about their writing. Besides, students can learn through audio and visual elements that are more enjoyable.

2.7.3 Assessing Writing Ability

Over the years, the assessment of writing ability has been changing a lot from the earlier time that had related writing ability with correct use of grammatical features to the abilities to write an essay or a summary (Shaw and Weir, 2007). In 1938, CPE (Certificate of Proficiency in English) writing component included a new summary writing task together with the established essay with the increased time allocation to two and a half hours. In the next year, the Lower Certificate in English included an English composition and language paper with time allotment to two hours. When doing the test, candidates were given a choice of subjects for a free composition, like a letter or an essay.

Responding to the increasing number of direct tests in the assessment of writing as mentioned on the above paragraph, in order to develop this type of tests to be appropriate for the levels of students, it is necessary to consider many characteristics of the tests. One of these characteristics is the construct of writing ability which represents a coherent understanding and articulation of the underlying abilities that the test needs to measure. Shaw and Weir (2007) advocate that if the construct of writing ability is not well defined and operationalised, it will be difficult for test developers to claim that their tests are useful and actually measure the ability that they are expected to measure. Therefore, it is necessary to have clear construct definitions. By doing this, test developers need to clearly define what levels of writing ability (i.e. beginner, intermediate, advanced) they want to measure from the candidates. The test developers also need to know how the nature of second language

writing ability changes across the proficiency continuum and how such ability can be measured at different levels (Shaw and Weir, 2007).

Regarding the necessity of construct of the test, in order to develop an effective writing test, test developers need to get rid of threat to construct validity as much as possible (Shaw and Weir, 2007). The test must not have factors, such as construct under representation and construct irrelevant variance that are regarded as the most important threats to construct validity. Construct under-representation occurs when the test is too narrow and do not contain important components of the construct of interest. For construct irrelevant variance, it occurs when the test score comes from systematic measurement errors resulted from factors, such as background and cultural knowledge or even unreliable scoring.

For the framework used particularly for assessing writing ability, Weir (2005) introduced socio-cognitive framework and its dimensions for writing assessment. Such framework is applied to conduct a comprehensive description and evaluation of Cambridge ESOL's current approach which aims to assess second language writing ability. The socio-cognitive framework integrates the individual psycholinguistic perspective with the individual and group sociolinguistic perspectives regarding the assessment process as part of a larger social endeavor (Shaw and Weir, 2007). It considers the language learner or test taker as being the centre of the assessment process rather than the test or measurement instrument.

For the model used in this framework, it must be related to the three main dimensions comprising (1) cognitive validity or aspects of cognition, such as the cognitive abilities of the test taker; (2) context validity or features of the language use in context, like task and situations in the testing event or beyond the test; and (3) scoring validity or the process of marking, rating, and scoring the writing work.

Rather than construct validity and socio-cognitive framework for assessing writing ability as mentioned by Shaw and weir (2007), Hawkey and Barker (2004) proposed a common scale and relevant issues necessary for the development of writing assessment. The following figure shows the relationship of a common scale for writing levels with the levels of writing abilities based on Common European Framework of Reference for Languages (CEF) that are required by the candidates for Cambridge ESOL examinations, the Preliminary English Test (PET), the First Certificate in

English (FCE), the Certificate of Proficiency in English (CPE), the Certificate in Advanced English (CAE), and the Key English Test (KET). Each of which requires the "C" as its own benchmark pass level.

Figure 2.3: The Relationship of a Common Scale for Writing Levels with the Levels of Writing Proficiency Based on Common European Framework of Reference for Languages

(Hawkey and Barker, 2004: 123).

To illustrate the scale and determine the levels of writing ability of the candidates based on Common European Framework of Reference for Languages (CEF) the table below shows the requirement in the writing abilities that the candidates need to master according to their levels of proficiency.

Table 2.2: CEF Overall Written Production

Levels	CEF Overall Written Production
C2	Candidates can write complex texts clearly and smoothly using an appropriate and effective style and a logical structure that helps the reader to comprehend and find significant points.
C1	They can write clear and well-organized texts from complex subjects, opinions at some length with secondary points, reasons and related examples, and appropriate conclusions.
B2	They can write detailed texts clearly from various subjects that are related to his/her field of interest. They can also synthesize and evaluate information and arguments from many sources.
B1	They can use a series of shorter sentences to write a simple text that is related to their familiar subjects from their fields of interests.
A2	They can join a series of simple phrases and sentences using simple connectors, such as "and," "but," and "because."
A1	They can write only simple isolated phrases and sentences.

(Hawkey and Barker, 2004, p.123).

Rather than the common scale and the levels of writing ability based on Common European Framework of Reference for Languages, in order to develop an effective test for students, tests developers need to consider some other relevant issues in writing assessment, such as communicative writing constructs, assessment of communicative writing abilities, bands and scales in the assessment of performance on communicative writing tasks, developing and revising rating scales, and example criteria and bands.

1. Communicative Writing Constructs. Saville (2003) suggests that test developers need to construct definitions or traits of ability to use as the purpose of the measurement and these definitions should be communicative constructs that actually promote the use of language skills in real communication. For the models of communicative writing construct, Hawkey and Barker (2004) proposed many useful models that were earlier developed from the views of experts who were keen on writing assessment. Bachman (1990), for example, shares the view that language competence consists of pragmatic competences (i.e. grammatical and textual competences) and organizational competence (i.e. illocutionary and sociolinguistic competences). Again, Cumming (1998) emphasizes a context-rooted view, and claims that the construct of writing is related not only to texts in the written script but also to the processes of thinking, composing, and encoding language into the texts. All of these components are regarded necessary for discourse interactions within a socio-cultural context.

2. Assessment of Communicative Writing Abilities. Hamp-Lyons (1990) claims that the assessment method measuring communicative writing abilities need to include the direct tests. Also, the direct tests need to support the candidate to be on tasks within a context, purpose, authentic discourse and behavioral outcomes. Bachman (1990, 1991) defines the assessment of communicative writing abilities as the appropriateness of language users' response to language as communication. Bachman and Palmer (1996, pp. 23–25) included authenticity (degrees of correspondence of the characteristics of the test task to the features of a target language use task) and interactiveness (types of involvement of the test taker in the test task). Saville (2003) advocates that the assessment of communicative writing proficiency makes a change in the relationship between reliability and validity. This is because the direct tests used

in the assessment of communicative writing abilities are not easy to rate, and there might easily brings about unreliability, but this restricts high validity. However, it is easier to obtain stable and consistent results that are free from bias and random error from more discrete-items. Also, Weir (1993) claims that the content coverage of direct performance tasks need to be considered carefully since it is the way to increase generalisability. This means that the sample of communicative language ability obtained from test-takers by a test task must represent the intended target situation, especially the task setting and task demands.

3. Bands and Scales in the Assessment of Performance on Communicative Writing Tasks.

In order to rate the test performance and interpret the performance for test candidates or receiving organizations, band descriptions may be used in the process of test development. This is because band descriptions can represent a range of scores beyond defined performances which can help test developers avoid a false judgment based on their own impression (Alderson, 1990). For band scale development, it is necessary to consider the issues which involve deciding which assessment criteria to include and how to define them; distinguishing the level or the end of one band from the beginning of the next band; avoiding long, over-detailed descriptions; and achieving intra- and inter-rater consistency when bands are used to measure language proficiency (CEF, 2001; North, 2000; Porter, 1990).

4. Developing and Revising Rating Scales. The methods for scale development can be divided into three groups: intuitive methods, qualitative methods and quantitative methods (Hawkey and Barker, 2004). Intuitive methods include the drafting of a scale derived from existing scales or other relevant source materials, such as a needs analysis of the target group that is earlier piloted and revised. The methods are the process that can be carried out by an individual, a committee (i.e. a development team) or an experiential group (the committee approach but over a longer period with piloting and feedback). Qualitative methods need the intuitive preparation and selection of material as well as the interpretation of results. The methods can be carried out in small workshops with groups of informants, while at the same time using the expert or participant-informant reactions to draft scales or use key features or traits to improve provisional criteria and scales to be related to proficiency levels. For

quantitative methods scale, the CEF (2001) proposed three quantitative methods of developing band scales, including discriminant analysis (how to decide which of the identified features are important for the rating), multi-dimensional scaling (a descriptive technique which is used to identify key features and the relationships between them) and item response theory (IRT) or latent trait analysis (using the Rasch model to scale descriptors of communicative writing abilities, connecting the descriptors with proficiency levels and using Rasch analysis to give scaling that is independent of the samples).

5. *Example Criteria and Bands.* In order to illustrate how the criteria and bands for the assessment of communicative writing abilities can be developed, it is worth studying the example criteria and bands from standard tests. International English Language Testing System (IELTS), for example, uses nine bands, such as expert, very good, good, competent, modest, limited, extremely limited, intermittent, and non-users. The main criteria used for the assessment include fulfillment of the task set (i.e. requirements, exploitation, relevance, arguments, ideas, evidence, such as logic, development, point of view, support, clarity; coherence and cohesion), communicative quality (i.e. impact on reader, fluency, and complexity), and vocabulary and sentence structure (i.e. range, appropriateness, accuracy, and error types).

To sum up, to develop an effective writing test, there are many factors that test developers need to consider, including construct of writing ability, threat to construct validity, framework of the writing assessment, rating scales, and criteria and bands. Based on the above discussion, test developers can use the socio-cognitive framework for their test development. For writing scales, they can use existing scales like Common European Framework of Reference for Languages (CEF) or other relevant source materials, such as needs analysis, but the latter sources of scales need to be piloted and revised.

2.8 Social Constructivism

Social Constructivism derived from the work of a Russian psychologist L. S. Vygotsky who places a great emphasis on culture and context in forming understanding (Vygotsky, 1978). Learning is not a purely internal process, but it is related to the context in which the learning occurs. The concept of learning is regarded

as a social construct that is mediated by language via social discourse. In this theory, language and communication are the main focus. Learning is considered as an iterative process which includes discursive, adaptive, interactive, and reflexive qualities (Laurillard, 1993). Students learn and work collaboratively, not individually like the Cognitive Constructivism of Piaget (Resnick, 1988, cited by Brown et al., 1989). For the Constructivist model of learning, Cognitive Apprenticeship has been suggested with the attempt to encourage students to have authentic practices through activity and social interaction (Ackerman, 1996). As for the Vygotskian notion, Social Constructivism has significant implications for collaboration in learning; that is, the Zone of Proximal Development (ZPD), which is the distance between the Actual Stage of Development whereby students can master the task by themselves and the Potential Stage of Development where they need guidance from adults or more capable peers to accomplish the task (Vygotsky, 1978). During the Potential Stage of Development, there is a process of scaffolding where students' learning abilities can be extended beyond the limitations of physical maturation (Vygotsky, 1978). This notion is different from the fixed biological nature of Piaget's stages of development which instead focuses on the individual interpretation of a perceived external reality (Matthew, 1992). For the relationship between the Social Constructivism theory and web-based instruction, it can be seen that the web plays the role of a communication medium which has strong potential for social interactivity (Dillenbourg and Schneider, 1995). Also, learning in the online course can promote heterogeneous grouping which assists in the construction of Zone of Proximal Development (Lambert and Walker, 1996). This is because the web offers both traditional Internet communication tools, such as emails, Newsgroups, Internet Relay Chat, MOOs, and virtual communities of learners in which small collaborative groups can achieve a common goal in learning (Dillenbourg and Schneider, 1995).

In conclusion, Social Constructivism is a theory that emphasizes the belief that language acquisition is from both nature (the ability to learn language that children possess since they are born) and nurture (social interaction). This theory focuses on social interaction where students need to work collaboratively with peers in order to achieve desired learning goals. Relating to web-based instruction, the web can play the role as a scaffold as stated in the theory to provide some assistance for students to

move from the actual stage of development to a potential stage of development. To illustrate this, when students have some questions in their mind, the web can scaffold them by providing information that they can easily search on the web. With the availability of various sources of information, students can learn by themselves, and this can promote autonomous learning.

2.9 Autonomous Learning

Due to the rapid commercial and industrial expansion, all employers are expected to have both social and academic skills. As a result of this change, nowadays, educational institutes are trying to stress the importance of students becoming life-long learners. Students need to respect individual differences, actively participate in both inside and outside the classrooms, and develop themselves to be autonomous learners (Nowlan, 2008). Autonomous learners are students who can formulate their own learning objectives, choose and use proper learning strategies, and evaluate a wide range of learning strategies (Dickinson, 1993). According to Wenden (1991) to be autonomous learners, students need to develop their self-confidence and the ability to learn, monitor, or manage their own learning. Students need to take responsibilities in their learning. They should have an opportunity to share their thoughts in the setting of learning goals, plan and execute learning activities, and review and evaluate effectiveness of their learning (Little, 1991). Moreover, being autonomous learners requires positive attitudes, capacity for reflection, and readiness to be proactive in self-management and in interaction with other people (Little, 1991).

As for teachers, to develop students to become autonomous learning, the teacher needs to promote autonomous learning circumstances (Harmer, 2009). S/he needs to create and maintain a learning environment which allows students to monitor their own learning. The teacher can encourage a variety of independent and effective learning behaviors by assigning students to do some tasks that require outside information beyond what they learn in the classrooms, such as finding an article relevant to their interest from the Internet, summarizing the article, and presenting it to their peers. According to Dam (1995), the teacher needs to use the target language as the medium of teaching and learning from the beginning of the program. S/he can

develop the ability of students to share their opinions in useful learning activities. Students should also have a chance to self-assess their own learning achievement and those of other peers (Dam, 1995).

Regarding the benefits of autonomous learning as a whole, when students are reflectively engaged with their learning, they have more opportunities to share their thoughts and negotiate their learning needs with others (Nowlan, 2008). Autonomous learning can enhance their motivation because students can manage their own learning in the way they like beyond the classroom settings. They can study extra in a self-access language learning center which provides them some kind of advisory service. Because of its benefits in language learning, it is worth promoting autonomous learning circumstances. The teacher can use a wide range of language learning activities, such as journal writing, using the Internet and technologies or else to support autonomous learning (Little, 2010). A reflective journal is one method that can help students improve their language skills as well as promote autonomous learning (Little, 2010). Their journal should include events that happen in school, travel, and social activities. Nowadays, with the increase of the use of Internet technologies in education, the teacher can assign students to write a reflective journal on the weblog which allows other people to give some comments. Students can use such comments to improve their writing ability. Apart from this, the teacher can use some other Internet and computer technologies to develop autonomous learning since the Internet technologies like Twitter, Facebook, and MySpace provide the learning environments which allow them to get new information, chat, and discuss with other users worldwide. These characteristics can enhance their language learning competence beyond the classroom settings (Little, 2010).

With the modern web browser on the web, students can study online easily and subsequently develop their language skills through discussion boards, interactive blogs, and online forums. They can download English music, new released movies, and TV shows which allow them to get exposure to different accents and expressions from native English speakers. Moreover, nowadays, there are Facebook, MySpace, and Second Life that can create awareness about language learning and involve students in the social networking communities (Nowlan, 2008). Second Life is a free program that allows students to create their own virtual environment where they can

interact, talk, or type virtually with over 12 million subscribers around the world (Nowlan, 2008). With this program, students can create a name and an avatar for themselves. They can meet and share interests with others who have similar thoughts. They can improve their speaking skills through voice chat in Second Life without pressure or anxiety as they experience in a real classroom. Meanwhile, Facebook and MySpace can help students present themselves using the target language, but unlike Second Life since these two programs are not presented in a 3D environment. Besides, there are other technological means that can help students improve their language ability as well as promote autonomous learning, like Skype, iChat, MSN, Yahoo, relative readings, blogs, online quizzes, and podcasts, just to name a few (Nowlan, 2008).

In short, autonomous learning is a learning style that promotes self-directedness, personalization, and less dependency on the teachers. To be autonomous learners, students need to be able to monitor their own learning. They need to have intrinsic motivation. It means that they learn because they like it without any forces from their teachers or their parents. Referring to web-based technologies, as is seen, such technologies provide conditions that promote students' learning autonomy (Li, 2005). The teacher can design the activities to encourage students to learn English through the Internet. S/he can use Facebook for discussion on certain topics with students. Moreover, in online communication, students who are shy to express their thoughts in a real classroom can avoid being anxious and nervous, but have courage to express themselves in English.

2.10 Web-Based Instruction

2.10.1 Teaching and Learning on the Web

Based on the study of Schneider and Germann (1999), the development of the use of computer assisted language learning and the websites in language teaching can be divided into three periods: (1) "correspondence study" where teachers and students communicate through emails; (2) "multimedia distance teaching" or "broadcast/ teleconferencing" where televisions and video broadcasts are used; and (3) "interactive, web-based instruction" where web resources enhance communication between teachers and students and among students themselves.

Responding to the third period, the Internet has led to the development of various online assignment sites which serve several educational purposes. Most of the sites contain online courses and assignments written by teachers and some students. According to Packhard and Holmes (2001), there are seven types of assignment sites: (1) portal sites (introductory sites providing links to external websites); (2) information sites (presenting their own articles or information); (3) article sites: (providing articles for sale or free downloading); (4) ask someone who knows sites (on-line courses where teachers answer students' questions online via chatting, emails, or spontaneous messages); (5) sites containing various books or site summaries (presenting summaries of books or other studies); (6) online encyclopedias or libraries such as Britannica or World Book sites (providing full text encyclopedias on-line to their subscribers); and (7) course service sites (on-line interactive courses).

Since there are many educational sites provided for students to visit when they need further studies, the teacher has to screen for quality of the web in terms of its accuracy and effectiveness in language instruction before the students are allowed to visit and do some activities. If not, students may get wrong information that later on cause difficulties in their learning. This issue raises awareness of the effectiveness of web-based instruction. The common features, such as authenticity, literacy, interaction, vitality, and empowerment, are what the teacher needs to consider as important features that the web-based course should have.

2.10.2 Effectiveness of Web-Based Instruction: Common Features of Web-Based Instruction

For ESL and EFL classrooms in particular, Warschauer, Shetzer, and Meloni (2002) point out that the web has some specific features that the teachers can employ in order to make the classrooms come ALIVE (authenticity, literacy, interaction, vitality, and empowerment). They are explained below:

1. Authenticity. The web provides benefits of accessibility and availability of authentic materials. On the web, students can access millions of authentic materials including research, magazine and newspaper articles, newsletters, movie reviews, and reports. For its role in the classrooms, web-based language learning materials can be used as supplementary authentic materials which increase active and creative learning,

collaborative learning, autonomous learning, cross-cultural knowledge, and critical thinking of the students (Warschauer, Shetzer, and Meloni, 2002).

2. *Literacy.* By learning from the website, students can increase their competence in language skills, such as reading, writing, speaking, and listening (Pacheco, 2005). At the present time, many websites offer some activities to the students who sound eager to develop their language skills on the web. For instance, the website like Interlink Language Center Reading Lessons provides practice in extensive reading, speed reading, and reading for science. PIZZAZ (People Interested in Zippy and Zany Zcribbling) gives simple-creative writing and oral storytelling activities that come with photocopiable handouts so that the students who access this website will be able to practice writing and speaking (Egbert, 2005). In case students want to improve their pronunciation and spoken grammar, they can visit Adam Rado's English Learning Fun Site (ELFS): http://www.elfs.com. For listening, there is a wide range of listening exercises on the Internet. If students want to listen to news stories, they can go to National Public Radio Site: http://www.npr.org. Besides, they can visit a large number of websites that can help them practice listening such as The Internet TESL Journal, Renata's ESL/CALL Corner, or Dave's ESL Café (Egbert, 2005).

3. *Interaction.* The web facilitates communication and also enhances students' interaction because it can be accessed anytime and anywhere. When surfing the web, students can communicate with other people through electronic communication (emails), and to date course resources, newsgroups or forums (online discussion groups), multimedia lecture presentations, and course management than traditional classroom learning (Pacheco, 2005).

4. *Vitality.* The web builds in a degree of choice and negotiation. Students can learn from the web with freedom without any force. The learning environment is based on their needs. This feature of the web-based instruction meets specific needs and interests of students.

5. *Empowerment.* The web empowers students to control their own learning. They can practice language with more confidence and have a low affective filter (Massy and Zemsky, 1995; Quesada, 2000). As a result, the students will become autonomous collaborative learners (Warschauer, Shetzer, and Meloni, 2002).

In case of developing countries like Thailand, web-based education (WBE) is suitable for teaching due to the following factors:

1. Due to the boost in information technology, the Internet has become one of the most important parts of people's lives. In most of the developing countries, particularly, the Internet provides easy access to instructors as well as students.

2. Web-based testing and evaluation offers necessary interaction and two-way communication between the instructor and students and among students themselves.

3. Based on advancement in technology, web-based learning is the cheapest form of technologies as compared to its other counterparts. When compared with audio or video broadcast, web-based learning is nearly free (Khan, Khan, and Al-Abaji, 2001).

In short, web-based instruction requires at least the ALIVE characteristics which represent, authenticity, literacy, interaction, vitality, and empowerment. All of these features not only contribute to the development of an effective web-based course but also raise the awareness of teaching and learning a language on the web-based tools which have been developed from Web 1.0 to Web 2.0 technologies. Especially the development and use of Web 2.0 technologies, nowadays, it was found that these new technologies have important roles for students regarding the policy to develop people in a knowledge-based society and the abilities to enhance collaborative learning in real-time communication through these technologies.

2.10.3 Web 2.0 Technologies

Web 2.0 is a set of Internet services and practices that offer users more opportunities to participate in various communities of knowledge building and knowledge sharing (Crook et al., 2008). With a step change from Web 1.0, Web 2.0 technologies involve the social activity offering possibility for user involvement in what makes up the Internet. The new technologies allow Internet users to upload and to be more involved in social networking communities (Crook et al., 2008). Web 2.0 technologies provide communication and data management resources that can encourage new forms of collaboration and coordination of users. They also promote the widespread participation where users can participate in activities, such as trading (buying and selling things from http://ebay.com); media sharing (uploading and downloading media files from http://www.youtube.com); media manipulation (using

web-accessible tools to design and edit media files from http://www.toondoo.com); combining data (combining data from several sources to make a new tool from http://code.google.com/gme); conversational arenas (having conversations with others from http://www.msm.com); social networking (having social interaction with other Internet members from http://www.facebook.com); blogging (writing an online diary from http://www.blogger.com); online games and virtual worlds (playing games in a virtual environment from http://www.virtualibiza.com); social bookmarking (sending their bookmarked web pages to a central site from http://www.librarything.com); collaborative editing (using web tools to create a digital product from http://www.glypho.com), wikis (allowing users to create, edit, and link web pages from http://www.tiddlywiki.com); and syndication (allowing users to upload content through an aggregator from http://www. podcast.net) (Crook et al., 2008).

In connection with education, Web 2.0 technologies give students new opportunities to be independent in their learning (Crook et al., 2008). These technologies encourage a wider range of expressive capacity that allows students to express their interests or work collaboratively with teachers, other peers, and authentic audience. Apart from this, there are two further reasons for putting Web 2.0 technologies into education. The first reason is that the capacity of Web 2.0 can promote current overarching policy. With the policy to develop the knowledge-based society, it is expected that new graduates should be prepared for engagement with the economy as knowledge workers. Responding to this, the activities in Web 2.0 as shown in the above paragraph are clearly important within modern economy. For the second reason, Web 2.0 technologies can support collaborative learning goals. Web 2.0 technologies can solve the problem of learner motivation and bring an authentic and challenging task for students. Students can sign in Facebook to chat, negotiate, share thoughts, and discuss about their study with their teachers and other peers. They can sometimes write their diary describing what they experience during school, travel, and social activities on their weblogs that allow other Internet users to share thoughts and give comments that will help them improve their writing skills (Elliott, 2008).

Regarding language learning theories, Elliott (2003) claims that Web 2.0 technologies, like Facebook, weblog, Second Life, MySpace, and many other sites can promote the perspectives of the Zone of Proximal Developments of the Social

Constructivism theory. This is because these Web 2.0 technologies are authentic (including real-world knowledge and skills), collaboratively produced (promoting work with other peers), deep (assessing learning knowledge in depth not just memorizing), engaging (including the personal interests of students), negotiated (promoting the agreement in learning between students and their instructors), peer and self-assessed (allowing students to assess themselves or other peers), personalized (using particular instruction around knowledge, skills, and interests of students individually), problem oriented (including problem solving skills), recognizing existing skills (accepting the students' existing abilities), and tool supported (promoting the use of other online technologies) (Elliott, 2008). All of these stated characteristics of Web 2.0 technologies are parts of the perspectives of Social Constructivism theory.

In this study, the Web 2.0 technologies that will be used alongside the web-based course are Facebook and weblog. These two networking tools are chosen since they gain a lot of popularity among college and university students and have many useful features for language learning development (Stelter, 2008). Facebook is a Web 2.0 application that emphasizes the building of communities of practice of people who share interests and activities as well as those who prefer to explore the interests and activities of others. In Thailand, it was found that the number of Facebook users reached 5,143,240 in September 2010 (Wongreanthong, 2010). Such a big number ranked Thailand the 21st in world rankings of the number of Facebook users (Wongreanthong, 2010). The cause of its popularity comes from its various features which allow teenage users to create profiles that include pictures, personal likes, and interests. Also, the information the users entered in a profile can be linked to other users who have posted similar information (Stelter, 2008). Moreover, on Facebook, there are bulletin boards, instant messages, emails, and the ability to post pictures and videos available for users, all of which can enhance student motivation, affective learning, and classroom climate (Mazer et al., 2007). In education, Facebook can provide many pedagogical advantages for both teachers and students. Using Facebook, students can contact and collaborate with other students, their teachers, or other outside experts. This process indirectly creates a community of practice—an important component of student education based on the Social Constructivism theory

(EDUCAUSE, 2006). Within such a community of practice, students can construct new knowledge concerning grammatical competence and writing ability by viewing samples of good writing work or posting problems on class assignments to other people. The questions or problems posted on Facebook can be viewed by other users. If students receive some comments or suggestions, they can use the information to improve their writing skills. For teachers, Facebook helps them make a connection with their students about assignments, upcoming events, useful links, and samples of work including both inside and outside of classrooms (Mazer et al., 2007).

Another Web 2.0 technology that gains some popularity is weblog (Chuo, 2007). Weblog is an online diary which provides a large space for students to write about their daily life in school, family, etc (Eastment, 2005). Students can write their comments, suggestions, problems in learning, while at the same time getting some useful comments and suggestions from more knowledgeable others, like their teachers, other peers or even authentic audience to improve their grammatical competence and writing ability. They can construct new knowledge from samples of good writing on the weblog. They can also contact and work collaboratively with both their teachers and their friends on the weblog.

In brief, it can be said that Web 2.0 technologies have much more useful functions. Such new technologies offer users to upload information and bring them to virtual environments where they can communicate with other people in the real time. In education, students can use Web 2.0 technologies as either a means in communication with other peers and teachers or a resource of information. With Facebook, for example, they can post their problems in learning, upload audio and video files, chat with other people, or play games to relax themselves. For introvert students, they can use weblogs to write about their opinions in particular topics that could be provided by the teachers.

2.10.4 Awareness of the Efficiency of Web-Based Instruction in the Thai National Education Act

The importance of English as an international language as well the boost of technology and education reform envisaged by the new Thai Constitution are key factors for new developments in English language teaching and learning in Thailand. In addition, based on the Education in Thailand Act 2002/2003 (2003: 84), it is stated

that technologies in education play an important role in enhancing the competitiveness of Thailand and its people in a knowledge-based economy and society.

The National Education Act B.E. 2542 was established for education reform in Thailand in order to regain competitiveness in studying. The new Act aims to develop people in all aspects, such as physical and mental health, intellect, knowledge, morality, integrity, and the pursuit of a desirable lifestyle. Within this Act, there are nine chapters:

Chapter 1. General provisions: objectives and principles;

Chapter 2. Educational rights and duties;

Chapter 3. Educational system;

Chapter 4. National education guidelines;

Chapter 5. Educational administration and management

      Part 1. Administration and management by the state (at national level, at the level of education service area, and at the educational institution level)

      Part 2. Administration and management by local administration organizations

      Part 3. Administration and management by the private sector;

Chapter 6. Educational standards and quality assurance;

Chapter 7. Teachers, faculty staff, and educational personnel;

Chapter 8.   Resources and investment for education; and

Chapter 9. Technologies for education.

Regarding the technological concern, Chapter Nine of the National Education Act 1999 puts an emphasis on technology for education (The Ministry of Education, 1999). In this chapter, the government will establish the Technology for Education Development Fund and a central unit that has authority over proposing policies, plans, promotion and coordination of research, and development and use of technologies in education.

Moreover, to promote the utilization of technologies for education, the Thai government has established many policies that expand the study area for everyone to stay connected anywhere and anytime. Since then, many IT projects such as the University Network (UniNet) and the Information Technology Campus (IT campus) have been introduced to the public. In addition, the Ministry of Education currently

has a policy to develop the National ICT Education Master Plan (2004-2006) and as for the 2006 fiscal year, over 515 million baht was approved (ONEC, 2006).

Responding to the policies of the reformed Act, web-based educational technology (WBET) was introduced as an aid to the traditional classroom course. The Thai government is trying to promote the use of WBET both in urban and rural areas. Examples are the Internet for Tambon, IT for education, and free low cost Internet for school and universities. Moreover, some universities have established an IT infrastructure, such as the Internet connectivity and wireless campus. However, many institutions in very rural and undeveloped areas still have little or no IT infrastructure (Crispin, 2000).

With the awareness of the Internet technology in Thailand, the development of web-based courses can be another innovation that fulfills the hope of many students in learning. Since web-based courses can shorten the distance in learning, students can study at home without attending regular classrooms. Especially in remote areas, web-based courses and other online technologies, such as emails, listserv, blogs, computer conferencing, as well as other forms of computer-mediated communication can be used as language teaching and learning tools. However, it does not mean that all of web-based courses will always be successful. This is because when designing a course, the teacher and other stakeholders need to think about contents and features of the web. They have to consider what should be included in order to develop the web that can serve the needs of most students.

2.10.5 Contents and Features of the Web-Based Course

Web-based course/curriculum refers to a web page or web site designed to supplement teaching and learning a language. It includes instructional guidance for students, texts, images, multimedia, and external links. It is a sort of course with specific features that make it different from the traditional teaching and learning styles (Cunningham and Billingsley, 2006).

1. On the web, a lot of learning materials that are relevant to the students' desired objectives can be preselected.

2. Students can access the web anytime they want, so the teachers do not have to repeat instructions for each student.

3. The web-based course promotes differentiating instruction because different individual learners of groups of them can work through in their own style.

4. Web pages can be used in the whole-classroom activities if a computer projector is connected to an instructor station or over a computer network.

5. The web-based course can be a replacement for the old traditional teaching materials, such as workbooks, textbooks, and chalkboards.

6. It does not take much time to develop the web-based course because there are many tasks that the teacher already engages in, such as lesson planning, giving instructions, providing examples, and assessing learning.

7. The web-based course promotes professional development. The teacher will keep up with new technologies and curricular changes at the same time.

8. The web contains big sources of information, such as breaking new stories, background information, maps, images, and video. All of these can be used to create a relevant lesson or course to make learning more interesting, immediate, and relevant to the students' lifestyles.

9. The web is useful for students with special needs because it allows individual students to choose particular topics based on their interest.

10. The web can save the costs of schooling by replacing textbooks, workbooks, papers, and other paper-based learning materials.

11. The web is an instrument that can be integrated with real world experiences because it provides background information and facilitates communication to make the students more educative.

12. The web provides a long lasting resource for schools because it can be updated quickly and efficiently.

13. The web-based course can be easily accessed because they require only a web browser, an internet connection, and free plug-ins for special content.

14. The web-based course can support national standards for technology integration in education.

15. The students' parents can freely participate in the education of their children with schools and teachers. They can see the course, try out the activities on the web sites, and have some more understanding about teacher expectations in particular courses.

16. The web helps students keep up with their missed work, especially those who have lost books, worksheets, or assignments. They can communicate with their friends and with the teacher to ask for learning assistance even though they are at home.

17. The web can come with the school web which is useful for facilitating participatory and promoting cooperative learning of the students in the school.

18. The web can be built as a culminating project that allows students to go into the creation of the web. This probably helps them have more understanding of the subject matter and also increases their motivation in learning.

Both contents and features of the web-based course are needed to consider as important factors for developing the course. Course developers need to consider such features as well as contents of the course in general, so that they can make use of them as the guideline for developing their own course.

2.10.6 Steps in Designing a Web-Based Course

To enhance the effectiveness of a web-based course/curriculum, Cunningham and Billingsley (2006) describe the procedures in designing a website for language teaching, such as (a) planning for goals and objectives, (b) choosing the activities, and (c) planning instruction and assessment.

The first phase of course planning is identifying goals. Here are the most important questions to address when identifying goals.

1. What are your general goals? The goals refer to what the teacher expects the students to achieve at the end of the course. This helps the teacher focus on the important points of the lessons and get rid of some details that are not concerned with the course.

2. What do you know about your learners? It is necessary to have information about students, such as ages, grade levels, particular interests, future goals, background in language, social or cultural backgrounds, learning styles and preferences, prior experiences, motivation, habits, attitudes, skills, knowledge, and beliefs about themselves and their learning. Such information helps the teacher contextualize the content of the course.

3. What is the theme or the subject matter of the web? This refers to subject areas that the students need to study such as math, science, social studies, etc.

4. What are learning objectives for the course; that is, the skills, knowledge, and attitudes the learners need to gain? All of these are what the teacher wants the students to develop in the course such as skills, knowledge, and proficiency in their profession, etc. (Cunningham and Billingsley, 2006:35)

After formulating the goals and objectives of the course, the teacher needs to think about the activities on the website. Cunningham and Billingsley (2006) provide some criteria for choosing the activities as follows:

1. Plan authentic activities. The activities that promote the language use in the real-life communication should be included in the website in order to help students apply what they have learned to use in the real situation. It is a good way to promote communicative language learning.

2. Promote self-directed learners. A good website should promote autonomous learning, so the students will have more choices to select what they want to learn from it.

3. Go beyond one subject area. The contents on the web should include other subject matters instead of teaching only English. This is because in the real-life situations, students can experience a variety of subject areas.

4. Use multiple approaches. It is a must to vary the activities on the web because the students come with different multiple intelligences. Therefore, one learning style may be suitable for one particular group of students but not with the others.

5. Go beyond retelling. The students need to have a chance to use the information rather than just retelling it. By doing this, the web can offer some activities, such as solving a mystery, designing a product or plan, building consensus, persuading, seeking self-knowledge, or making judgment.

6. Keep it simple. In order to help teachers and students not to get confused when using the web, the website should be simple and easy to use.

7. Borrow activity ideas from others. When designing the website, the teacher can borrow the ideas from others that support the objectives of the course but not to copy them directly.

8. Touch imagination. It is a need to put students into the creation of art which includes music, painting, sculpture, creative writing, drama, and dance as a way to create their imagination.

9. Build to promote intentionality. The activities conducted on the web should have a clear purpose. For example, students should have the opportunity to plan for their work instead of following the procedure set by the teacher.

10. Engage the learner. The activities on the web need to be more challenging in order to spark students' interest in learning.

11. Build on controversy. The web should include controversial issues, such as gender roles, capital punishment, the role of government in reducing crime, etc.

12. Use characteristics of the web. When designing the web, the teacher needs to consider the main characteristics, such as hypertext, multimedia, communication tools, and interactivity.

13. Build activities around currents events. The web should include the issues that are related to the students' lifestyles. The topics can be parts of the course, such as geography, history, science, literature, and art.

14. Use non-web materials, events and locations. It is a must to include at least non-web material in order to help students learn from the real objects.

15. Facilitate spontaneity and discovery. The teacher can plan for open-ended inquiry that allows students to choose what they want to study on the web in order to raise their awareness and engagement in learning. (Cunningham and Billingsley, 2006:101-106).

The last step the teacher needs to think of most is planning instruction and assessment. Bastiaens and Martens (2000) recommend the devices that can help the teacher manage the classrooms and assess the students after doing the activities on the web. The devices for developing a web-based course includes the overview information on the introductory pages; alternative forms of navigation, such as drop-down menus and site-specific search engines; indexes or site maps that link to other sections; glossaries or definitions of important terms; reviews pages describing what students should have learned in that lesson; visual organizers, such as concept maps; animations or videos; summaries of concepts and procedures; examples showing possible ways of completing an activity; opportunities for further exploration of

topics; links to external websites and estimate of how much work or time an activity should take; teaching guides and additional ways for teachers or students to get further information about the web; questions for reflection and discussion; and embedded assessment containing self-assessments and rubric.

After the teacher develops the web-based course due to the above procedures, s/he should pilot the course in order to find out how effective the course is for teaching and learning. In case there are some parts in the course that seems unsuccessful, s/he can rewrite them. For the content of the course, the teacher needs to consider the regular course objectives in terms of what students are expected to achieve at the end.

2.11 Related Research

2.11.1 Non-Thai Research on Web-Based Instruction

With the unique features of the Internet that allow people to study anywhere and anytime, many scholars have paid more attention to the integration of the web-based technology in teaching and learning.

Based on the previous studies, it was found that the Internet could be used in the classrooms to increase learner motivation and engage them in authentic and interactive language experience (Chun and Plass, 2000; Gruber-Miller and Benton, 2001; Kung and Chuo, 2002; Mosquera, 2001; Osuna and Meskill, 1998; Rico and Vinagre, 2000). Highlighting the advantages of the Internet, web-based language learning activities (WBLL) were developed as a supplementary resource for teaching English as a second language. In the University of Southern Queensland, Australia, Son (2008) studied the use of web-based language learning activities in language teaching courses, especially with ESL classrooms. The study explored the usefulness of the web activities in the ESL classroom. The data collection was done with 12 students who were non-native speakers of English.

It was found that most of the participants had positive attitudes toward WBLL. From the results of the questionnaire, it could be seen that from the total rating scale of 5.00, all participants enjoyed the web activities (Mean = 4.75); they learned a lot from the web (Mean = 4.17); they found that the web was well-prepared (Mean = 4.17); they gained confidence in their ability to use the web for learning (Mean = 4.08); the web-based language learning activities made the language course more interesting

(Mean = 4.00); they liked to use the web-based language learning activities during the class time (Mean = 4.25); and they wanted to access web activities outside class (Mean = 4.42). The researcher suggested that to develop and implement web environments in instruction, the teacher had to become active and critical web users together with having strategies for selecting and managing web-based learning materials.

In short, the web-based language learning activities (WBLL) had a lot of advantages for ESL students. Such activities made positive attitudes of the students to learn the English language. They felt more enjoyable to study the language on the web. The web made the language course more interesting than what they normally studied in the traditional classroom.

In other ESL contexts, Egypt is the country where technology in education has been put in the Education Act of the country as in Thailand. However, there is relatively little published research on English language teaching and the role of technology in instruction even though both of them play a role in recent education reform efforts. The literature on the topic concerning with technology is limited to a few internal publications of the Ministry of Education in Egypt. Highlighting this importance, England (2007) studied technology applications in English language teaching in Egyptian universities. The study investigated how technology was employed by university English teachers in Egypt and the role and status of the use of technology in four areas: learning, teaching, research, and teacher education. The subjects of the study were 68 teachers: 50 from the Egyptian national university and 18 from private universities. The data were collected by means of a survey and an interview. The survey addressed the questions related to the use of technology of teachers in English language classrooms. The interview focused on the teachers who agreed to describe the use of technology in the English classrooms.

The findings showed that teachers were ready to use technology in teaching English language skills because they believed that technology was effective and useful for pedagogy. According to the results of the study, 57 teachers used Internet-based assignments with the students, 31 for testing and 26 for finding materials and information that supplemented their lesson plans. For learning, most teachers believed that technology helped improve the students' language skills. However, the teachers

needed to be trained in using the technology for teaching. For teacher education, most teaches needed to integrate pre- and in-service training in the use of technology in teaching English. For research, most of the teachers believed that more research on the impact of technology on English language teaching and learning was needed. Like many studies, this article claims that the era of globalization with the newcoming of technologies, especially the Internet, plays significant roles in instruction. Responding to this, the teachers have to enlighten themselves to keep up with the new technologies and again make use of them to facilitate learning in the classrooms.

In brief, most of the teachers in this study viewed the Internet technology as a valuable tool for developing language teaching and learning. They also realized the importance of training teachers about how to use the Internet properly.

In Asia, it was found that the majority of students in Hong Kong usually had great difficulty with writing because they had no ideas to describe in the essay. For the teacher, it was also not easy to give immediate feedback to each individual student. Due to this fact, Wong et al. (2007) carried out a pilot study on the impact of the web-based essay critiquing system on writing at the tertiary level. A computer-supported critiquing system was developed using Latent Semantic Analysis (LSA). The system provided just-in-time feedback to students, and it was a web-based technology that was easy to engage in anywhere. In order to determine the effectiveness of the system, the satisfaction of the students in using the system was explored. The subjects of the study were first- and second-year undergraduates in Hong Kong. They were randomly assigned to the treatment group and the control group. Each consisted of 14 students. In doing this, both groups were assigned to write a 300-word essay on the topic "Should there be rules against fast food in schools?" with the time allotted of 80 minutes. However, there was only the treatment group that was allowed to use the essay critiquing system.

The findings showed that the average score and the essay length of the treatment group were slightly higher than those of the control group. As for the satisfaction of the students, all of them thought that the system was easy to use and 86% agreed that the teacher should adapt this system to teach essay writing. At the end of the article, the researcher recommended this system for use in other educational sectors, especially in secondary schools.

In brief, the web-based essay critique writing could help students improve and develop their writing ability. However, in order to develop an effective course, it is necessary to consider the perceptions and opinions of both teachers and students toward effectiveness and future direction in the course development.

In Malaysia, for example, Embi, Hamzah, and Badusah (2001) studied trainees' perception of SMART Net as an Internet-based language teaching and learning tool. This study examined teacher trainees' opinions on the use of an online learning-to-learn model known as SMART Net in terms of its suitability and usability. The online learning-to-learn model included SMART English Learning, SMART Malay Learning, and SMART Arabic Learning. The subjects of the study were 167 teacher trainees: 108 trainees specializing in TESL, 26 in Malay Literature Education, and 33 in Islamic Education. All of them worked at the Faculty of Education, Universiti Kebangsaan Malaysia. The instrument used in data collection was a self-reported questionnaire.

Based on the findings, the model SMART Net was useful for language teaching and learning. From the total of 4.00, the questionnaires showed the mean score of 3.57 for the usability of SMART Net in teaching and 3.54 in learning. It also showed the mean score of 3.35 for suitability in teaching and 3.41 in learning. In addition, this article reviewed the criteria for evaluating information on the Internet, such as purpose and audience, authority, scope, format, acceptance of material, content, accuracy, currency, uniqueness, link made to other resources, quality of writing, graphic and multimedia design, workability, user friendliness, browsability and organization, interactivity, and connectivity.

In conclusion, it can be said that SMART NET had both usability and suitability which were the essential functions of the web-based course development. Besides, another important factor that is important for web-based course development is the ability of web-based course developers to develop the web-based course of desired functions. To handle this problem, there might be a workshop organized for developing the efficiency of web-based course developers.

Another study in Malaysia was paid to the importance of the abilities of web-based course developers which are necessary for web-based course development. Hussin (2004) stated that even though there were programs provided for developing a

web-based instruction, for many language teachers, developing Web-Based Computer-Assisted Language Learning (CALL) materials may become a difficult task because of their limited exposure to computer studies and some complexities of the program. To handle this problem, language teachers may hire programmers to convert written contents into interactive lessons. Therefore, when the lessons need to be changed in order to meet the needs of the majority of the students, it can take time and cost much money. In responding to this problem, nowadays there are a lot of authoring systems available that offer a shortcut to develop a web-based learning material. At the School of Language Studies and Linguistics, Universiti Kebangsaan Malaysia, a course VE6844 Multimedia Applications in English Language Teaching was introduced to train in-service teachers to develop web-based language learning materials. To find out the effectiveness of the course, the study investigated the usefulness of the course in post-coursework activities of in-service teachers in their teaching profession. The subjects of the study were 20 former students of VE6844 Multimedia Applications in English Language Teaching course who were presently in-service teachers.

The findings showed that 100% of the participants agreed that the course helped them develop better understanding in the design of web-based language learning package, helped them select good language courseware for their institutions, and had been very helpful in their career development. As for the advantages of the Internet, 95% advocated the use of the web in language teaching. The researcher also suggested the computer programs that teachers could use to develop their own CALL, such as Hot Potato and Microsoft FrontPage.

In short, there should be a training course for web-based course development for teachers since such a course can help them design and develop an effective course. Teachers as course developers can learn how to develop web-based courses from many computer programs, like the authoring system that has proven useful. The program can save the time and is easy to use for the development of web-based courses.

From the above oversea research, it can be said that there are many useful language learning activities and programs on the web, such as web-based language learning activities and web-based essay critiquing system on writing which were effective for the development of students' language competence. Moreover, as

mentioned in the study of Son (2008), to gain success in language teaching and learning, students need to have positive attitudes toward the web-based language learning activities. Teachers as course developers need to develop an effective course for students. To do so, there should be computer training programs available for in-service teachers to learn how to develop their own web-based courses as mentioned in the study of Hussin (2004). In addition, to promote the use of technologies in education, the teacher should be able to apply the Internet technologies to use in four educational areas, including learning, teaching, research, and teacher education as mentioned in the study of England (2007).

2.11.2 Local Research on Web-Based Instruction

In Thailand, there are studies on the topic of web-based education as well (Chan, Chow, and Jia, 2003). People who work in the fields of education believe that web-based instruction can enable individual students to learn by themselves since it encourages self-directed learning, self reflection, learner-centered learning, and just in-time-learning.

With the awareness of the development of web-based instruction in Thailand, Yamkate and Uantrai (2003) studied the difficulties with language in using the Internet for independent learning. This study was done in order to respond to the policy of the National Education Act of 1999 (Chapter 4: section 22), which had the aim to encourage students to be autonomous learners. To enhance learning autonomy, the Office of the National Education Commission (1999: 28) highlights the necessity of technology for education as a tool for students to acquire knowledge on a continual lifelong basis. Responding to this, this study examined how language influenced secondary school learners' Internet use. It also investigated how students dealt with language difficulties, including grammar, vocabulary, and content on the web. The participants of the study were five Mattayomsuksa 2 students and four Mattayomsuksa 5 students at Surasakmontree School. The data were collected from the student participation in a small-scale project using the Internet for retrieving information of their own interest. After finishing surfing the Internet, the students were required to summarize the main idea of the texts they had read. Then they had to fill in a questionnaire which consisted of two parts: rating the selected website for English

Project Work and classifying the way they dealt with language difficulties. Finally, a semi-structured interview was conducted with the subjects individually.

The findings of the study showed that all participants in Mattayomsuksa 2 dealt with vocabulary on the web by looking up words in a dictionary and guessing meaning from contextual clues. For Mattayomsuksa 5 students, there were 75% of the students who looked up words in a dictionary and guessed meaning from contextual clues. For grammar, it was found that Mattayomsuksa 2 students tried to understand the structure (80%), and Mattayomsuksa 5 students tried to guess meaning from the form (75%). In terms of the content, Mattayomsuksa 2 students tended to look for the main idea and read all the information to get the detail (60%). However, Mattayomsuksa 5 students tended to read all the information to get the detail and just looked through it (50%). For the usefulness of the web in language learning, the study revealed that the students could use the Internet technology to serve their individual purposes. Mattayomsuksa 2 students, particularly, claimed that graphics on the web helped them guess the meaning of unknown words to some extent (60%).

In brief, the Internet technology was a large source of information that allowed the students to practice language autonomously. In this study, both groups of the students were encouraged to use learning strategies to deal with texts on the Internet. The study reported that the Internet could serve the students' needs in language teaching. They learned to look up the meaning of words derived from the Internet in a dictionary, guess the meaning from contextual clues, try to understand the structure, guess the meaning from form, and look for the main idea and read all the information to get the details.

In addition, based on the Information and Communication Technology (ICT) Master Plan (2002-2006) which aimed to increase the use of e-learning in human resources development, it is important for schools in both urban and rural areas to develop and provide students with technology for education. Highlighting this importance, Vate-U-Lan (2007) studied the readiness of e-learning connectivity in Thailand. This study explored the perception of school administrators of both schools in Bangkok and those in provincial areas in terms of readiness of e-learning connectivity. The instruments employed in this study were an email invitation along with electronic-based survey form and a letter of invitation along with paper-based

survey. The participants of the study were 21 administrators of public secondary schools in Thailand: 4 participants were in Bangkok and 17 were in other provincial areas. All of them were required to answer the major research questions: (1) Do the school use the Internet for education?, (2) What is the frequency of teacher training programs designed to improve IT competency?, (3) Are the teachers ready to use the Internet for educational purposes?, (4) How to educate teachers to use the Internet to enhance quality of education?, (5) What is the strength of using the Internet for education?, (6) What is the weakness of using Internet for education?, and (7) What kinds of supportive projects relevant to Internet for education are in place?.

The findings showed that all schools in Bangkok used the Internet for education (100%), and in rural areas there were a few of them that did not use the Internet (5.9%). As for the frequencies of teacher training, it was found that schools outside Bangkok had slightly more teacher training per semester (60%) than those in Bangkok where half of the schools did. As for the readiness of Internet usage for education, it was found that all schools in Bangkok reported their complete readiness in using the Internet for education, whereas in rural areas 70.6% reported that they were ready for Internet technology. According to such findings, it can be implied that schools in rural areas needed some development in the Internet for education, not only connectivity but also computers with good quality.

In short, it can be said that nowadays the Internet technology played a significant role in Thai education. Especially schools in Bangkok, the above study found that 100% of the schools used the Internet for education. Regarding the rise of Internet technology in education, there should be teacher training programs available for teachers to develop themselves to be ready with the technology.

In conclusion, it can be said that web-based instruction is an alternative language learning tool that can encourage students to study from authentic materials as well as promote autonomous learning. As mentioned in the study of Yamkate and Uantrai (2003), the students needed to deal with some difficulties of English grammar, vocabulary, and contents on the web. They learned how to deal with such difficulties on their own by guessing the meanings of words or sentences from contextual clues, grammatical forms, and graphics available on the web. Moreover, in order to help students achieve language learning, the readiness of e-learning connectivity in

Thailand was required as mentioned in the study of Vate-U-Lan (2007). There should be computers with good quality for students and training courses available teachers both in rural and local areas of the country.

The review of related research suggests that as a whole, web-based instruction can help students develop their language abilities. Apart from this advantage, web-based instruction can be integrated with other skills in language teaching, such as grammar instruction, writing instruction, and form-focused instruction which was investigated in the present study.

2.12 Applications of Web-Based Instruction

Web-based instruction is an online teaching that has changed the way students learn language. It not only makes learning more easily but also gives students opportunities to study anywhere and anytime. With the web technology, students do not have to visit actual learning sources, but they can search for any current information or content areas that are related to their study at home. Besides, web-based instruction can be applied to teach various aspects of language, like grammar, writing, or even being used as a means to transmit some other types of instruction as it is integrated with form-focused instruction that is stated below.

2.12.1 Application of Web-Based Instruction to Teach Grammar

According to Egbert (2005), the website can provide an extensive amount of activities, while at the same time giving students' opportunities to enhance specific language skills and grammar skills. AlKahtani (1999) claims that the effectiveness of computers and web-based language learning instruction can enhance reading and writing abilities as well as grammar skills. Apart from this, Pacheco (2005) points out that web-based language learning instruction can direct students to grammar practice, reading, pronunciation, vocabulary, and listening without any limitation in retrieving or practicing language through these web-links. Pacheco (2005) suggests the website like "Adam Rado's English Learning Fun Site (ELFS): http://www.elfs.com/" which enables students to speak, whilst improving their pronunciation and spoken grammar. Pacheco (2005) points out that the web-based course can integrate language skills in a meaningful way. Therefore, according to Pacheco (2005), the web-based course with integrated language skills can help students practice with more confidence and have a

low affective filter. Moreover, through the web, students can receive personal and academic empowerment in the skills' achievement (Pacheco, 2005).

For grammar teaching, there are many useful websites that the WWW provides for practicing specific grammar structures, particularly the grammatical features that students are not good at (Egbert, 2005). One of useful websites that includes listening, reading, and writing skills with grammar teaching is NetGrammar (http://www.netgrammar.le.ucr.ac.cr/) (Pacheco, 2005). NetGrammar is not only commonly used for self-directed learning but also plays the role as an extra course to regular classrooms. It was created with the belief that if students have opportunities to practice new grammatical features in several contexts, it will be easier for them to internalize and master such grammatical features. Because of this, NetGrammar offers an abundance of both controlled and communicative exercises where students can perceive new grammatical knowledge and then apply them to use properly. As for its design in general, in this website the grammatical structures are presented in the forms of grammar charts and explanations. In the listening part of the website, students can listen to various short conversations, interviews, and storytelling. Following this, the reading part allows students to read many different short authentic passages, such as newspaper clippings. It also includes pre-reading, while-reading, and post-reading activities. Then in the wring part, students can practice writing with the new grammatical features. Moreover, they can access other supplementary tasks or web links in order to enhance their previous practices on listening, reading, writing, and grammar. With this website, students can email their writings to their teachers or friends. This website also has the review section where students can use as a self-assessment.

For the application of web-based language learning tools developed for grammar teaching, based on the previous studies, it can be said that grammar teaching seems to work well with such tools. Based on the project of Torrie (2007), a web-based tool was used to assess students' grammatical proficiency. This tool made the teachers able to assess mastery of students' grammar skills in the ELC grammar classes. It was named "a web-based oral grammar assessment tool". It contained the online database of speaking tasks designed to target specific grammatical structures. The students were required to access this online database. Then the teacher accessed

the database through the website and made assessment by using groups of selected speaking tasks. The students also accessed the speaking tasks through a separate recording application developed to show the prompts and record their responses. Then the teacher accessed the recorded responses on the website and rate the students' responses by a rubric used for measuring mastery of students' grammatical structure. According to the evaluation of the project, the students and the teachers claimed that the web-based oral grammar assessment tool was useful for them in providing practice and self-assessment opportunities. The majority of the students liked using the program since it aided their language learning in general.

In short, it can be said that the websites like "NetGrammar" and "Oral Grammar Assessment Tool" are alternative teaching tools in grammar teaching that should be promoted to use in the classrooms because these websites integrate grammar teaching with language skills. It was believed that the integrated teaching styles like this can help students improve grammatical proficiency and language skills (listening, speaking, reading, and writing) at the same time.

In other words, with the evidence from previous research, even though there are many websites that provide grammar lessons and exercises for students, like "NetGrammar" and "Oral Grammar Assessment Tool", the empirical research about teaching grammar on the web is relatively rare, and most of them are regarded as the skills to support other language skills more than the focus on the grammar instruction itself. In Taiwan, for example, Tsai (2006) studied students' perceptions of English learning through EFL WebQuest. The purpose of the study was to investigate the potential role of a WebQuest module as a supplement to English as a foreign language instruction and to evaluate an EFL instruction. The participants of the study were 44 college students who enrolled in EFL reading course at a technological institute. They were taught to use a researcher-developed WebQuest module embedded in the EFL instruction. The instrument of the study was Likert-type attitudinal survey. It was found that the students had an overall positive attitude and perception in their vocabulary acquisition and reading comprehension toward WebQuest learning. However, there was a low correlation between their motivation and grammar learning.

In brief, based on the finings of this study, it can be implied that grammar instruction was considered as a secondary skill after language skills, like listening,

reading, speaking, and writing. The students had positive attitudes about their development in reading and vocabulary, but they lacked motivation to study grammar from WebQuest learning. However, it is not yet conclusive that the web-based learning tool like WebQuest learning cannot enhance grammatical competence because the outcome of their learning can depend on their factors, such as types of tasks, grammar lessons on the web, teaching approaches, and so forth.

2.12.2 Application of Web-Based Instruction to Teach Writing

Coniam and Kit (2008) point out that with the development of web-based language learning tools like blogs, WebQuests, and forums, students can access online writing and use such tools to develop their writing ability. To enhance the efficiency of writing instruction through the use of web-based technologies, the teacher needs to consider the web-based instruction as a valuable tool and include it into the teaching of ESL writing by assigning student to write emails, express their thoughts on forums, or even create web pages for language learning (Coniam and Kit, 2008). Such writing activities include the combination of web-based resources and cooperative writing (Coniam and Kit, 2008).

From previous research, many studies found that writing instruction can be taught via the web-based instruction with good results. Karchmer (2001) studied how the Internet influences literacy and literacy instruction in K-12 classrooms of thirteen teachers. This study was carried out in order to explore thirteen K-12 teachers' reports about how the Internet influenced literacy and literacy instruction in their classrooms. The participants were 10 women and 3 men, representing 11 different states in the U.S. All of them were considered exemplary at using technology by their colleagues. The data were collected from interview transcripts, journal entries, and pages of ancillary materials. According to the results of the study, the teachers revealed that using the Internet with their students had the effects on some aspects of literacy and literacy instruction, especially reading and writing skills of the students. The eight elementary level teachers regarded the appropriateness of reading materials on the Internet, evaluating information accuracy, and publishing student work on the Internet as the important aspects for reading and writing instruction. Meanwhile, the five secondary school teachers emphasized the safe Internet use and the skills used for evaluating information found on the Internet.

In brief, it can be said that from the perceptions of teachers of K-12 classrooms, the Internet affected literacy and literacy instruction in their classrooms, especially reading and writing skills. The teachers also needed to evaluate information on the Internet and chose the appropriate ones for the students

Another research funded by a grant from the office of Special Education Program in the U.S. Department of Education, it was carried out by Englert et al. (2007). The researchers studied about using an Internet-based technology to improve the writing of students with disabilities. The purpose of the study was to investigate the effects of scaffolding students' writing performance between the paper-and-pencil condition and the TELE-Web condition. The participants were 35 elementary-age students with disabilities, 20 students in the experimental condition and 15 students in the control condition. The instrument used in the study was the TELE-Web software which was used to highlight the textual locations, such as writing introductions, details, and conclusions. During the writing process, the teachers used various writing strategies which included brainstorming, mapping, editing, and revising, to support their students with disabilities. The students in the experimental group accessed the scaffolding tools and mapping technologies through the TELE-Web Internet-based software whereas those in the control group completed the mapping and writing tasks using a traditional paper-and-pencil format. Based on the results of the study, the post-test scores showed that the papers of the students in the TELE-Web condition (M = 3.304) were rated higher in holistic quality than those of the students in the paper-and-pencil condition (M = 2.861). The students in the experimental group produced a coherent text that contained subtopics with more relevant facts and details. They wrote clearer introductions than those in the control group.

In brief, it can be said the TELE-Web Internet-based software is an effective learning tool that can help the students write a coherent text with more relevant facts and details better than the traditional learning tools like the paper-and-pencil condition. Regarding this result, the teacher can make use of such software or other web-based learning tools to help students improve their writing ability.

Besides the effectiveness of the web-based language learning tools toward the development of writing ability as discussed in the above studies, it was found that there are many tools on the web that are easily applied for teaching writing. One of

many popular tools is wiki. A wiki is a hypertext system used for storing and modifying information (Coniam and Kit, 2008). It is a database which is easily edited by anyone via a standard web browser (Coniam and Kit, 2008). It also contains key features, such as a user-friendly interface used for editing content, history tracking, defining the size of authoring groups, and a non-linear structure for editing (Coniam and Kit, 2008). McPherson (2006) regards the benefits of wikis in writing instruction. He claims that wikis have the relationship with the development in students' writing ability. Wikis offer flexibility and authenticity for students in which they can log in, view content, edit work, or even upload new materials (McPherson, 2006). If students' work is published on wikis, any users in the world can access it. According to this potential audience, students will consequently be more enthusiastic in their writings because they know that there are many audiences who can see and make comments rather than their teachers and their peers (Achterman, 2006b; Richardson, 2006). Moreover, since students will be involved in a large amount of interaction in group work, they need to learn how to work collaboratively with others during the writing process. Regarding this issue, the teacher needs to have sufficient preparation before applying wikis to writing instruction (McPherson, 2006). To do so, the teacher needs to provide students with the skills necessary for writing, such as negotiation, cooperation, collaboration, and respect for others' work (McPherson, 2006). When students acquire necessary skills, they will be able to develop a deeper comprehension in the writing process as well as being able to work collaboratively (McPherson, 2006).

From previous research, wikis have also proven useful for writing instruction. In the study of Coniam and Kit (2008), for example, they carried out research with 29 students studying for their Foundation Diploma (Hospitality) at the Hong Kong Institute of Vocational Education (IVE). This study explored the effectiveness of wikis and how they could be used in group writing tasks. In order to find out these things, the project was carried out with the teaching of survey report writing. By doing this, groups of students had to produce a report based on the survey data they had collected. The results of the study showed that the group of students that used wikis could produce more clearly expressed and persuasive documents which were parts of their writing tasks more than those who used a pen-and-paper format. Based on the

successful use of wikis in enhancing writing ability, Coniam and Kit (2008) suggested that wikis should be integrated with collaborative writing.

Besides the use of wikis for writing instruction, web-based interactive writing environment is another online tool that Yang, Ko, and Chung (2005) have found that it can enhance students' writing ability better than the conventional writing environment. This is because through such environment, students can easily review and learn how to improve their own essay writing. It can motivate students to review other students' essays and also engage them in interactive discussions as well as enable them to interact with each other or with their teachers. For teachers, they can constructively review students' essays through this environment. To clarify this, Yang, Ko, and Chung (2005) described about the development and evaluation of a web-based interactive writing environment developed for elementary school schools. The environment provided students with three writing themes, such as "story pass on," "story chameleon," and "thousand ideas." These stories were used to encourage reading comprehension, creativity, and problem-solving skills of the students. The researchers designed three assessment mechanisms which included expert assessment, self-assessment, and peer assessment to give constructive comments for the students to review and criticize other students' essays. The students were also assigned to review their own essays to discover their own strengths and weaknesses in writing in order to encourage them to improve their writing skills. For the writing environment, it consisted of four functional modules which included writing, assessment, tool, and system management. The results of the system logs and assessment were analyzed by the system usage for over two years. The findings indicated that the students could improve their writing skills by participating in the web-based interactive writing environment. They submitted many essays, interacted with their peers online, and reviewed their peers' essays. Moreover, based on the analysis of the assessment mechanism, it was found that expert assessment and peer assessment were not significantly different. According to the results of the study, Yang, Ko, and Chung (2005) suggested that this web-based interactive writing environment should be included as an extension to regular class since it was useful in promoting the students' writing ability under reflective assessment criteria, creative writing themes, and social interaction.

Rather than wikis and web-based interactive writing environments, there are many more web-based language learning tools that many researchers claim can improve and develop students' writing ability. Cho and Schunn (2005) claim that SWoRD (scaffolded writing and rewriting in the discipline) is useful to support reciprocal peer reviews in writing and reviewing practice. SWoRD is commonly used with large-scale content classes in which writing and reviewing are critically important (Cho and Schunn, 2005). SWoRD also promotes the whole cycle of writing, such as reviews, back-reviews, and rewriting by scaffolding the journal publication process (Cho and Schunn, 2005). It helps students gain content knowledge, while at the same time reviewing their writing skills. SWoRD includes algorithms used particularly for counting accuracy of individual reviewer, especially with a variety of drawbacks of reciprocal peer reviews (Cho and Schunn, 2005). Cho and Schunn (2005) make a claim from their empirical evaluation that the SWoRD is an effective approach that can improve students' writing ability in content classes. This is because the SWoRD approach integrates writing and rewriting practices with content courses by focusing on the role of reciprocal peer views which in turn raise many challenges. It was developed with the belief that most of peer reviewers are novices in the ability to criticize other work, so in order to get rid of the effect of novices' peer reviews potential drawback, SWoRD offers many functions like review accuracy indices and authors' back-evaluations which can help the reviewers give the right feedback to their classmates. As a result, the students will be able to use such feedback to improve their own writing (Cho and Schunn, 2005).

Another web-base learning tool that is recently suggested as one valuable source for teaching writing is weblogs. Godwin (2003) claims that weblogs provide learning opportunities online since they are easily linked to larger on-line communities. Students can use their personal blogs as an electronic portfolio. When publishing the blog online, students have more opportunities to show their writing to many readers other than their teachers and their peers. Such readers can also make some comments on students' writing via the blog. Moreover, because students know that they have a large number of audiences who can give comments, they often make higher quality writing than those students who write merely for their teachers (Zhang, 2009).

Supporting the usefulness of web-based language learning tools toward writing instruction, Lin (1997) concluded that these tools can bring about success in writing instruction because it enables students to learn from each other collaboratively, students can receive feedback from any users, their writing work can be published, and they can get a good editing and learning environment at the same time.

In brief, there are various styles in the teaching of writing on the web, such as blogs, wikis, scaffolded writing and rewriting in the discipline, and many others. All of these sites can help students improve their writing ability as well as develop the ability to review writing of other students. They can also make use of such good writing to improve their own writing. For the teacher, s/he can apply the teaching methodologies in these websites to develop his/her own course.

2.12.3 Application of Web-Based Instruction in Language Teaching with the Integration of Form-Focused Instruction

According to Abrams (2003), web-based instruction is divided into two categories: asynchronous e-learning (i.e., email and bulletin boards) and synchronous e-learning (i.e., real-time, live discussion through chat rooms). Asynchronous e-learning allows students to connect to each other on the web at each person's own convenience and schedule. It enables communication in a different time and place. Meanwhile, synchronous e-learning allows students to use the target language through real-time interaction (Lee, 2008). With synchronous e-learning, students can receive feedback, and have more chances to interact with other people at the same point of time (Long and Robinson, 1989).

Concerning form-focused instruction, Ellis (2001) and Long (1991) point out that this type of instruction plays a significant role in learning a target language since communicative activities which focus only on meaning processing may be not enough for learning a language. Form-focused instruction can also encourage noticing of forms within meaningful communication in which a focus on language can be provided in either implicit or explicit ways (Spada, 1997).

For the integration of web-based instruction with form-focused instruction, it was found that corrective feedback has been applied with the online teaching (Ammar and Spada, 2006). Corrective feedback has an important role in facilitating the acquisition of certain forms of the target language which may be difficult to learn via

the input alone (Ammar and Spada, 2006). Corrective feedback is divided into two forms: explicit feedback and implicit feedback. In explicit feedback, there is an overt indicator to show that an error has been committed while in implicit feedback, there is no such a type of indicator. Implicit feedback includes the form of recasts which are defined as ones of corrective feedback techniques. Recasts are the techniques that reformulate the erroneous forms of the student immediately after s/he has made it, at the same time trying to maintain his or her intended meaning (Ellis et al., 2006). It is believed that recasts can raise the students' consciousness of the target language's forms which will lead to their success in using such forms (Long and Robinson, 1998). However, according to Lyster and Ranta (1997), it was claimed that implicit feedback in the form of recasts may result in many uncorrected errors. Meanwhile, using explicit feedback in the form of meta-linguistic feedback is more preferable since this technique allows the teachers to explicitly explain how to use the target language's forms (Lyster and Ranta, 1997). Lyster (2007) claims that meta-linguistic feedback can lead students to self-repair which can engage them in a deeper level of process where they can identify and fix their erroneous forms on their own correctly.

Regarding the usefulness of form-focused instruction and web-based instruction, Razagifard and Rahimpour (2010) integrated such two approaches together by comparing the effectiveness between two types of form-focused instruction (implicit feedback in the form of recast and explicit feedback in the form of meta-linguistic feedback) taught through a synchronous tool. The purpose of the study was to investigate the impact of two types of computer-mediated corrective feedback on the development of learners' second language knowledge: (1) implicit feedback in the form of recast, and (2) explicit feedback in the form of meta-linguistic feedback. The participants of this study were 30 beginning level students of English in Kosar Private School in Meshkinshahr. The students were classified into three groups, consisting of two experimental groups and one control group. In the experimental groups, one group received implicit feedback in the form of recast while the other received explicit feedback in the form of meta-linguistic feedback. Meanwhile, the control group had got no treatment. The experimental groups needed to complete two computer-mediated focused tasks. During the experiment, they had task-based interaction via text-chat and received focused, corrective feedback when an error was

made with the target form, but the feedback were given in the different ways between the groups. Their language acquisition was measured by means of the three tests, comprising a meta-linguistic knowledge test, a grammatical judgment test, and a computerized fill-in-the-blank test. It was found that all of these tests had similar results. The findings of the study showed that the two experimental groups that received computer-mediated corrective feedback gained higher mean scores in comparison with the control group. In addition, the group that received explicit feedback in the form of meta-linguistic feedback obtained higher mean scores than the group that received implicit feedback in the form of recast. From the results of the meta-linguistic knowledge test, the meta-linguistic group had the mean score of 7.00, followed by 6.50 in the recast group, and 5.2 in the control group. From the results in the grammaticality judgment test, they got the mean scores of 12.8, 12.6, and 11.7 respectively. For the final test, the computerized fill-in-the-blank test, they got the mean scores of 17.80, 17.20, and 14.90 respectively. Based on the results of the study, the researchers suggested that computer-mediated focused tasks integrating with form-focused instruction, especially the explicit feedback in the form of meta-linguistic feedback were effective and should be applied to use in teaching a target language for both ESL and EFL students.

Based on the above information, it can be said that form-focused instruction on computer mediated communication resulted in more successful learning than the traditional course. Moreover, it was found that the students who received explicit feedback gained higher mean scores than those who learned from implicit feedback. Regarding this, the present study included formed-focused instruction in the web-based course, aiming to enhance grammatical competence and writing ability of sports science students. However, even though there are many researchers who reported that web-based instruction can work well with form-focused instruction and has effectiveness in language learning, in order to develop an effective course, the course must be evaluated by the experts using the acceptable criteria.

2.13 Web-Based Course Evaluation

Even though several studies recommend that to evaluate the effectiveness of web-based courses, the web-based courses need to be compared with traditional

classroom courses, such a way of evaluation may not be used successfully (Sonner, 1999). This is because there are significant differences between delivery methods used in traditional classroom courses and those of web-based courses (Baker, 2003). Traditional classroom courses are face-to-face synchronous courses that allow learning to occur simultaneously in the interaction between the teachers and the students (Baker, 2003). Such a personal interaction offers the teacher the opportunity to provide feedback, direction, and observe learning activities while the students are receiving feedback, responses, and directions (Baker, 2003). Moreover, traditional classroom courses put the students with other students where they can rely on others' experience as well as interact in groups. Lastly, learning in traditional classroom courses requires students to attend class regularly. Such a requirement creates their responsibility as well as provides a source of accountability (Baker, 2003). On the contrary, learning through the web-based course has limitations in immediate feedback, time, and space separation of students and teachers; removal of nonverbal language (gestures) communication; as well as reduction of control of testing environments. These limitations can weaken the evaluation process (Baker, 2003).

Responding to particular characteristics of web-based courses that limit the evaluation process, Baker (2003) proposed "Integrating Evaluation Questions into the Framework." The framework was used to design and evaluate web-based course components. The questions provided were added to address each evaluation point.

Evaluation Criteria	Questions
Bloom's Criterion	Which of the Bloom criterion (knowledge, comprehension, application, analysis, synthesis, and evaluation) is being addressed by this learning activity? To make decisions about criterion category, compare objective statements with the verb list of Bloom's taxonomy (Bloom, 1956). 1. Knowledge: arrange, define, duplicate, memorize, recognize 2. Comprehension: classify, describe, identify, report, restate 3. Application: apply, choose, illustrate, solve, write 4. Analysis: analysis, categorize, criticize, distinguish, test 5. Synthesis: assemble, collect, mange, organize, propose 6. Evaluation: argue, assess, choose, value, evaluate (Osborn, 2002)
Tyler Objectives	Are the objective statements written appropriate to the Bloom's criterion and Tyler's objectives?
Specific	Are the objectives stated in a clear, well defined, and concise manner? Are they absent of ambiguity?
Measurable	Do the objectives state a specific measurement used for indicating goal achievement?

Figure 2.4: Integrating Evaluation Questions into the Framework

(Baker, 2003)

Evaluation Criteria	Questions
Attainable	Are the objectives possible to achieve by the students in the allotted time?
Relevant	Are the objectives relevant to the Bloom criterion?
Trackable	Are there time deadlines indicated for each measurement?
Challenging	Are the objectives difficult but possible to achieve?
Communicate	Are the objectives well communicated?
Delineated	Are the objectives clearly and obviously described as parts of the learning component?
Ownership	During the evaluation, do the students agree with the stated objectives?
Tyler Experiences	Which types of web-based learning tools will be used to deliver the course?
Practice	Do the activities on the web require the students to practice the skills necessary for achieving the desired behavior? Is there any feedback mechanism for correcting the students' mistakes?
Reward	Are there any rewards provided for the students to motivate them during the tasks?
Performance	Are the students able to achieve the learning goal in allotted time?
Variety	Are a variety of experiences gained from web-based learning tools used for enhancing students' learning? Do the web-based learning methods implemented provide experiences relevant to the Bloom Criterion category?
Outcomes	Are the web-based learning tools chosen limit the possible outcomes? If the results gained from the activities show undesired outcomes, is there a feedback mechanism provided?
Tyler Organization	Which level of learning is being developed and evaluated?
Continuity	Are there enough opportunities for students to practice the skills needed for achieving the desired behavior? Are practice opportunities provided continuously during the whole course?
Sequence	Do activities build upon the previous ones? Do activities enable students to achieve the desired level of complexity based on Bloom's taxonomy?
Integration	Do the activities show the relationship between the desired behavior and other subjects?
Tyler Evaluation	Do the evaluations used particularly measure the intended behavior?
Baseline Evaluation	Does a baseline evaluation access the students' initial knowledge of the desired behavior?
Successive Evaluation	Are there a series of evaluations used particularly to evaluate students' progress in learning?
Appropriate Evaluation Type	Are there any skills or knowledge needed for completing the evaluations which represent the skills and knowledge for achieving the desired behavior?
Appropriate Bloom Criterion Level	Do the evaluations reflect mastery of the behavior based on the desired Bloom's criterion level?

Figure 2.4: Integrating Evaluation Questions into the Framework (Continued)

(Baker, 2003)

The above framework was earlier used in the Virtual High School (VHS) which was a project sharing of 87 high schools in 30 states in the United States (Baker, 2003). The project offered web-based distance learning high school courses including mathematics, English, sciences, social studies, arts, humanities, and practical living subjects for students in grades six through twelve. The project was founded in 1996 and today it offers over 200 courses in various subjects to over 4000 students. The course selected for this study was Biotechnology in the topic "The Changing Face of Genetics" (Baker, 2003). It was a twenty-six week course. The purpose of the study was to propose a framework for the development and evaluation of web-based distance learning high school courses by integrating an adaptation of Tyler's principles with Bloom's Taxonomy. For the limitations of the study, this study was limited to an analysis of K-12 curriculum components which were located on the web (Baker, 2003). After the course was implemented, the course evaluator was assigned to give point values for each "yes" answer based on the category. Each question in the parts of objectives and experiences had the value of 2.5 points and for organization and evaluation, each question in these two parts cost 5.0 points. After rating, it was found that the course had the total point value of 59. In this number, 10 points were from the objectives, 14 points from experiences, 15 points from organization, and 20 points from evaluation. Baker (2003) concluded that the framework gave an in-depth means of evaluation web-based distance learning courses and their components. It integrated Tyler's principles with Bloom's Taxonomy that were standards for course evaluation. Moreover, even though the 59 point score of the evaluation seemed low, in the study, there were no other courses or lessons to be compared with (Baker, 2003).

In brief, in order to evaluate the effectiveness of web-based courses, it is necessary to use specific criteria which can be different from the traditional language classroom. This is because most of web-based courses have a different delivery method that tends to emphasize asynchronous learning more than synchronous learning in traditional courses. For this present study, to make the evaluation process flows effectively and gain course validity, the criteria proposed by Baker (2003) were applied for use since this criteria clearly states the functions of web-based courses as well as include Bloom taxonomy and Tyler objectives which were important criteria for developing a course as part of the course evaluation.

2.14 A Summary of Conceptual Framework of the Study

For the conceptual framework in designing the web-based course, this study comprised two main concepts, namely web-based instruction, and form-focused instruction using the themes in sports science as the contexts in the study. For the treatment used in the form-focused instruction, explicit teaching was used in this study since explicit instruction in grammar usage, and effective models assist students in understanding and achieving their objectives in language learning (Baker, Gersten, and Graham, 2003). Particularly writing ability which is another critical skill needed for students' academic development, also relies on good models as well as explicit objectives (Baker, Gersten, and Graham, 2003; Bromley, 2003).

With respect to the participants of the study, the researcher chose to study the case of sports science students since students in this group usually had problems in writing paragraphs in the English language. At Mahidol University, for example, according to the data of the previous semester, this group of students had the mean score of 24.37 in the writing part which was less than the mean score of 28.39 of the whole students from other faculties. Moreover, when comparing the mean scores with students from other faculties, it was found that the value of mean differences between sports science students with students from the other faculties showed negative numbers. This indicates that this group of sports science students had writing scores less than students from all of the other faculties. Furthermore, the students in this group usually made many grammatical errors in their writing and could not choose suitable connectives, transitive verbs, conjunctions, relative pronouns, or some other grammatical units to form sentences in the paragraph. In addition, because the core course focused on grammatical competence and writing ability and the students usually had problems in writing with some grammatical error sentences, grammatical competence was raised here as a dependent variable used to enhance students' writing ability.

In this study, the researcher developed the web-based course alongside using the other two Web 2.0 technologies, including Facebook and weblog. The web-based course was used as a means to teach grammatical and writing skills using form-focused instruction which used the themes in sports science as the context of the instruction. During the course, the students were allowed to write comments, post their

problems in learning, or chat with friends or teachers about the lessons in the web-based course through Facebook. For the weblog, it was provided for the students as a free space to practice English writing in order to estimate their progress in grammatical competence and writing ability.

Relating to the theories of language teaching approaches, it was found that many features of web-based instruction are relevant to the principles of Social Constructivism. The web plays the role of a communication medium which has strong potential for social interactivity (Dillenbourg and Schneider, 1995). Additionally, the web-based course and the other two Web 2.0 technologies (Facebook and Weblog) can scaffold and help students move from the actual stage of development to the potential stage of development in the construction of Zone of Proximal Development (Lambert and Walker, 1996; Vygotsky, 1978). The web offers both traditional Internet communication tools, such as emails, Newsgroups, Internet Relay Chat, and MOOs, and virtual communities of learners in which small collaborative groups can achieve a common goal in learning (Dillenbourg and Schneider, 1995). For the Web 2.0 technologies, like Facebook and weblog, the students can share their thoughts and get comments and suggestions from other peers, teachers, or other Internet users to scaffold their knowledge in grammar and writing.

Regarding the role of web-based instruction and form-focused instruction toward the effectiveness in language learning, the present study aimed to develop and to find out whether a form-focused web-based instruction effectively helps Thai undergraduate sports science students enhance their English grammatical competence and writing ability. The study also examined the effects and investigated the students' attitudes toward the instruction.

To conduct an effective web-based course, a needs analysis in this study was conducted with the sports science students, the English instructors, the course administrator, the chair of the English program, and other stakeholders in the fields of sports science. To have a clear understanding in students' needs, there were questionnaires and semi-structured interviews. After that, the web-based course was verified by experts using "Integrating Evaluation Questions into the Framework" by Baker (2003). The web-based course was piloted with a sample group of sports science students. Then, the web-based course together with the other two Web 2.0

technologies (Facebook and weblog) was implemented with 83 first-year undergraduate sports science students at the College of Sports Science and Technology, Mahidol University. Finally, the effectiveness of this type of instruction was evaluated again by the end of the course.

Theories and Concepts

Web-based instruction
- Effectiveness of the web-based Instruction (Warschauer, Shetzer, and Meloni, 2002)

- Relevant concepts to Social Constructivism (Lambert and Walker, 1996; Vygotsky, 1978)

Form-focused instruction
- Form and meaning within meaningful contexts (Long and Robinson, 1998)
- Explicit and implicit directions (Spada, 1997)
- Theme-based approach used as the context of the instruction (Herrero, 2005)

Grammatical Competence
- Necessity for conveying meaning and promoting language accuracy (Haussamen, Benjamin, Kolln, and Wheeler, 2003)

Writing Ability
- Important skills for professions (Baker, Gersten, and Graham, 2003; Bromley, 2003)

Needs analysis (Bailey, 1998; Berwick,1989; Graves, 2000)
- Questionnaires
- Semi-structured Interviews

A web-based course using form-focused instruction alongside Web 2.0 technologies to enhance English grammatical competence and writing ability of sports science students

Verification of the course (Baker, 2003)

Piloting the course

Implementation of the course

Evaluation of the course
- Pre-test and post-test   - worksheets printed out from the website
- Questionnaires   - Interviews
- Students' pieces of writing on the weblog

Figure 2.5: The Conceptual Framework of the Study

CHAPTER III
RESEARCH METHODOLOGY

This chapter describes the research methodology of the study. The research procedure is divided into three main parts: needs analysis, course design, and determination of the effectiveness of the form-focused web-based instruction in enhancing English grammatical competence and writing ability.

3.1 Needs Analysis

The needs analysis was conducted in this study to answer research question number one. This phase aimed to determine (1) the grammatical features needed for grammar instruction and (2) the themes in sports science that were used in the form-focused instruction. All of these data were used to develop the web-based course that was used alongside the other two Web 2.0 technologies: Facebook and the weblog. The instruction aimed at enhancing grammatical competence and writing ability of Thai undergraduate sports science students.

3.1.1 Population and Sample

The needs analysis was conducted in the second semester of the 2010 academic year. There were three population groups in the needs analysis process. The first population group was 83 first-year undergraduate sports science students at the College of Sports Science and Technology, Mahidol University. Since the number of students in this group was not too large and to avoid the problem that the students who were not engaged in the needs analysis would lose some advantages in learning, all of the students were included as the sample of the study. A number of members in the second population group were 47 people who worked in the fields of sports science, including coaches, physical education teachers, and sports science academicians at Sports Authority of Thailand. The final population group was nine English teaching staff, including the chair of the English Program, the course administrator, and seven English instructors who had taught English to sports science students at Mahidol University. Like the group of sports science students, all of the people in this group were selected as the sample of the study. More detailed information about these participant groups was described below:

Group One: Sports Science Students

The participants in this group were 83 first-year undergraduate sports science students at the College of Sports Science and Technology, Mahidol University. This group of students was selected by means of purposive sampling because they had problems in writing English the most when compared with students from other faculties. Due to the data of the previous semester, this group of students had the mean score of 24.37 in the writing part which was less than the mean score of 28.39 of the whole student population from other faculties. During the process of needs analysis, the students were asked to elicit data regarding their needs and preferences, all of which were used in the design of the course. Such information included some grammatical features that caused difficulty in their writing and themes/topics in subject matters in sports science which were regarded necessary for their study. The themes in sports science were included because based on an extensive review of literature, the researcher believed that if the students had an opportunity to study English from their familiar topics in their study fields, it could enhance their knowledge of both content areas in the mainstream classrooms and language skills. They could also learn how to use some grammatical features from themes in sports science and apply such rules to use in their pieces of writing. As a result, they could write easier and faster.

Group Two: People Who Worked in the Fields of Sports Science

This group of participants included 47 people who worked in the fields of sports science, including coaches, physical education teachers, and academicians at Sports Authority of Thailand. They were selected by means of purposive sampling because they had occupations that most of sports science students were expected to have after their graduation. Therefore, detailed information gained from this group of participants, like types of writing and the topic areas in sports science they used in their actual professions were needed for determining the components of the course. This study included only the participants who volunteered to give the ideas.

Group Three: English Teaching Staff

This group of participants included nine English teaching staff, including the chair of the English Program, the course administrator, and seven English instructors at Mahidol University. They were selected by means of purposive sampling. The chair

of the English program was selected with the aim to find out the information about English curricula that sports science students needed to take in each academic year as well as the direction for the course development of the institute. The course administrator was another subject who was required to give information about the English course syllabus of sports science students as well as course components, such as lessons, activities, class size, and course evaluation. As for the English instructors, they were selected because they were responsible for the teaching and learning of English of sports science students. They had direct experience with this group of students in the classrooms. With this reason, they could determine the problems that caused writing difficulties of students. Moreover, all of the participants in this group had sufficient understanding for the two main concepts of the study (form-focused instruction and the web-based instruction) since these two approaches were what this participant group usually experienced in their professions. Form-focused instruction was used for teaching English grammatical features, skills focused in many English courses of the faculty. Especially English Course Level 1, sports science students needed to take this course in the first academic year. Apart from this, there was an old web-based course that had been developed in the form of Moodle websites by the Faculty of Arts, Mahidol University. Therefore, there was not impossible if all of them had good comprehension in these teaching approaches.

3.1.2 Research Instruments

In the process of needs analysis, questionnaires, and semi-structured interviews were included.

1. Questionnaires

The data gained from related research and existing theories were used to develop the questionnaires of the study. The questionnaires were distributed to the participants in order to find out the overall needs and preferences of the three participant groups for developing the web-based course which aimed at enhancing the students' grammatical competence and writing ability. In order to develop an effective web-based course, there were three sets of questionnaires used separately to elicit data from sports science students, people who worked in the fields of sports science, and English teaching staff. All of them were written in Thai in order to prevent language

barriers. For the five-point Likert scale items of the questionnaires, they were adapted from "Likert-Type Scale Response Anchors" suggested by Vagias (2006).

a) Questionnaire for Sports Science Students

All of 83 first-year undergraduate sports science students were required to answer the questionnaire in order to find out their overall needs and preferences in the learning of some grammatical features and types of topic areas in sports science for the web-based course development. This questionnaire was developed to obtain the students information about types of grammar to be taught like what they had studied in English Course Level 1, the topic areas in sports science necessary for their study in their mainstream classrooms (all of the topic areas were part of the sports science curriculum that they were informed in the primary session of the university), and the importance of the main concepts of the study, such as form-focused instruction and web-based instruction in enhancing their grammatical competence and writing ability. To make certain that the students knew how to rate the level of importance of these concepts, there were some explanations describing teaching methodologies of each concept in Thai in order to eliminate the problems of language barrier. To gain all of these data, the questionnaire comprised five parts as follows:

Part 1: Demographic Characteristics Data

Background information of the students, including ages, genders, educational levels, and the number of years studying the English language was collected. For their perceptions of their current levels of English language abilities in general and writing abilities in particular, a five-point Likert scale ("excellent [4.5-5.0]," "very good [3.5-4.49]," "good [2.5-3.49]," "fair [1.5-2.49]," and "poor [1.0-1.49]") was used to estimate their competence. The students were also required to give information about their readiness to learn from the web-based instruction, like how often they accessed the Internet and language teaching websites, types of Internet technologies they could use, and the place where they used the Internet.

Part 2: English Grammatical Features and Structures Necessary for Enhancing Writing Ability

The students were required to specify types of English grammatical features and structures based on their past experience that they thought were essential for enhancing their writing, such as subject-verb agreement, parts of speech, connectives,

coordinating conjunctions, etc. They could rate the levels of importance using a five-point Likert scale ("extremely important [4.5-5.0]," "very important [3.5-4.49]," "moderately important [2.5-3.49]," "slightly important [1.5-2.49]," and "not at all important [1.0-1.49]"). The selected grammatical features and structures were taught with form-focused instruction on the web-based course.

Part 3: Topic Areas Necessary for the Students' Academic Areas of Study

The students were required to rate the levels of importance of topic areas in sports science (i.e. types of sports, general education for sports science, science and mathematics for sports science, and special subjects for professions in sports science) in which they had studied in their mainstream classrooms using a five-point Likert scale ("extremely important [4.5-5.0]," "very important [3.5-4.49]," "moderately important [2.5-3.49]," "slightly important [1.5-2.49]," and "not at all important [1.0-1.49]").

Part 4: Necessity of the Teaching Methods like Form-Focused Instruction and Web-Based Instruction toward the Development of Students' Grammatical Competence and Writing Ability

There were some explanations about two main concepts (form-focused instruction and web-based instruction) in Thai provided in the questionnaire. The students could rate their agreement or disagreement about the effectiveness of these concepts in enhancing grammatical competence and writing ability. To do so, a-five Likert scale ("strongly agree [4.5-5.0]," "agree [3.5-4.49]," "neutral [2.5-3.49]," "disagree [1.5-2.49]," and "strongly disagree [1.0-1.49]") was used in the rating.

Part 5: Suggestions for the Development of the Web-Based Course

The students were required to answer open-ended questions about types of activities and lessons, the web-based course design in general like visual and audio presentations of teaching, etc. The questions were provided for the students to give their opinions about their preferences in learning through the web-based course. They could use their own experience in the use of the Internet to answer the questions in this part.

b) Questionnaire for People Who Worked in the Fields of Sports Science

The second set of questionnaire was developed to determine types of topic areas and types of writing assignments necessary for people who worked in the fields

of sports science, such as coaches, physical education teachers, and academicians. Such information was used to determine types of writing and topic areas in sports science necessary for sports science students. The data were collected from 47 people who were willing to give the information. People in this group were selected in order to find out about their problems in English writing from their daily work experiences. The questionnaire comprised four parts as follows:

Part 1: Demographic Characteristics Data

This group of people was required to give information about ages, genders, highest levels of education, job positions, work experiences, the number of years studying the English language, how much English was needed in their occupations, and problems in using English in general and writing abilities. For their perceived levels of English language abilities in general and writing abilities, a five-point Likert scale ("excellent," "very good," "good," "fair," and "poor") was used to estimate their own competence. For the importance of English language skills in general and writing skills in their occupations, a five-point Likert scale ("extremely important," "very important," "moderately important," "slightly important," and "not at all important") was used to estimate the levels of importance. For the frequency of problems in using the English language skills in general and writing skills, a five-point Likert scale ("very frequently," "frequently," "sometimes," "rarely," and "never") was used to estimate the levels of language problems they experienced in their occupations. They were also required to rate the levels of importance of English writing when comparing with other language skills (reading, listening, and speaking) using a three-point scale ("more important," "equal, "and "less important".) All of these pieces of information were used as the background to determine the level of English language abilities that sports science students were required to have for their future occupations.

Part 2: Types of Writing Found in Everyday Lives and Professions in Sports Science.

The people in this group were required to rate the frequency of English writing work, such as short notes, memos, summaries, official letters, and reports they had to do as part of their jobs. To have such information, a five-point Likert scale ("a great deal [4.5-5.0]," "a moderate amount [3.5-4.49]," "occasionally [2.5-3.49]," "rarely [1.5-2.49]," and "never [1.0-1.49]") was used to rate the frequency.

Part 3: Topic Areas in Sports Science

The people in this group who came from various professions like coaches, physical education teachers, and academicians were required to rate the levels of importance of the topic areas in sports science derived from the sports science curriculum for undergraduate students at the College of Sports Science and Technology, Mahidol University. To do so, a five-point Likert scale ("extremely important [4.5-5.0]," "very important [3.5-4.49]," "moderately important [2.5-3.49]," "slightly important [1.5-2.49]," and "not at all important [1.0-1.49]") was used to rate the importance.

Part 4: Suggestions for the Development of English Instruction, Especially for English Writing for Undergraduate Sports Science Students

They were freely allowed to give additional suggestions for the development of English instruction for sports science students.

c) Questionnaire for English Teaching Staff

This participant group was included in order to gain information about the direction in the course development as well as their opinions about types of English grammatical features and grammatical errors that had a lot of effects on the students' writing abilities based on their past experience. There were seven English instructors, the course administrator, and the chair of the English Program at the Faculty of Liberal Arts, Mahidol University. To obtain the information of this participant group, this questionnaire included the following six parts. However, since some parts of the questionnaire were not related to some participant groups, they could skip them and did the ones that were related to their academic fields.

Part 1: Demographic Characteristic Data

This participant group was required to provide their background information about ages, genders, highest levels of education, academic positions, the number of years teaching the English language, and the amount of work in the fields of teaching, such as research, books, textbooks, and booklets. All of these data were used to determine if they had sufficient information to provide in this study.

Part 2: Tendency in Developing the English Curriculum

This part was designed for the chair of the English program and the course administrator. For the English instructors, they could skip this part. The chair was

required to answer open-ended questions about the English curriculum development of the institute and the institute policy in the English language teaching. The course administrator was required to give information about the components of English Level 1 course which was designed for sports science students, such as course syllabus, goals and objectives of the course, teaching and learning materials, course duration, and course evaluation.

Part 3: English Grammatical Features and Structures Necessary for Writing Ability

The participants rated the importance of grammatical features (i.e. subject-verb agreement, parts of speech, connectives, coordinating conjunctions, etc.) derived from the English Level 1 course which was the compulsory course for first-year undergraduate students at Mahidol University. All of these grammatical features were regarded as necessary for developing writing abilities based on the English Level 1 course syllabus. Like the student group, the participants in this group could rate the levels of importance using a five-point Likert scale ("extremely important [4.5-5.0]," "very important [3.5-4.49]," "moderately important [2.5-3.49]," "slightly important [1.5-2.49]," and "not at all important [1.0-1.49]".)

Part 4: Writing Errors in English Grammatical Features and Structures Found in the Students' Pieces of Writing

This part was designed for the English instructors and the course administrator since they were the groups of people who had direct experience in dealing students' errors in their writing assignments. For the chair of the program, she could skip this part because she did not teach in this course. They were required to rate the frequency of grammatical errors they found in the students' written assignments by using a five-point Likert scale ("a great deal [4.5-5.0]," "a moderate amount [3.5-4.49]," "occasionally [2.5-3.49]," "rarely [1.5-2.49]," and "never [1.0-1.49]") for rating.

Part 5: Effects of Form-Focused Instruction and Web-Based Instruction toward the Enhancement of English Grammatical Competence and Writing Ability

The participants were required to rate their agreement or disagreement toward the two main concepts (form-focused instruction and web-based instruction) about the necessity of these kinds of language instruction toward grammatical competence and writing ability of the students. To do so, a five-point Likert scale ("strongly agree [4.5-

5.0]," "agree [3.5-4.49]," "neutral [2.5-3.49]," "disagree [1.5-2.49]," and "strongly disagree [1.0-1.49]") was used in the rating.

Part 6: Suggestions and Expectations Regarding the Web-Based Course

The participants were allowed to give additional suggestions about types of grammatical features and structures, activities and lessons that were considered necessary for developing students' grammatical competence and writing ability.

Validation of the Questionnaires

Before distributing the questionnaires, the content validity of these three sets of questionnaires was examined by six experts. The present study used six experts because the questionnaires were developed for both people who worked in the fields of sports science and the groups of sports science students and English teaching staff who were concerned with teaching and learning English. Three of them were the English instructors who had taught in the university level for more than 20 years and the other three were sports science academicians who had 10-year experience in the fields of sports science. The questionnaire for sports science students and another one for English teaching staff were validated by the experienced English instructors. After that, the questionnaire for people who worked in the fields of sports science was validated by the sports science academicians. The experts rated each item in the questionnaire by marking agreeable (+1), not sure (0), and disagreeable (-1) on the checklist. After that, the IOC (Index of Item Objective Congruence) was employed to calculate the validity of the questionnaires (Carmines and Zeller, 1979). The formula of the IOC is as follows:

$$IOC = \frac{\Sigma R}{N}$$

IOC = Index of item objective congruence having the values from -1 to 1

ΣR = Sum of the score of each item resulting from the three experts

N = Number of experts

Moreover, to make certain that the questionnaires had the acceptable level of validity, the score from the validation must be equal to or higher than 0.5. The items that had validation value less than the desired level were revised and developed to make them appropriate for the participants of the studies.

According to the results of the IOC calculation, it was found that these three sets of questionnaires reached acceptable levels of validity. The value of content validity of the questionnaire for sports science students was 0.96, followed by 0.88 of the questionnaire for English teaching staff, and 0.81 of the questionnaire for people who worked in the fields of sports science. The experts also provided some suggestions that could be used to adjust and make the questionnaire items clearer. For the questionnaires of sports science students and English teaching staff, the experts suggested that mechanics like run-on sentences and fragments, punctuation marks, and comma splice should be included as the items to be compared with the necessity of grammatical features required for writing skills. For the questionnaire of people who worked in the fields of sports science, the experts suggested that the levels of the necessity of writing English and the importance of topic areas in sports science should be divided into two parts: levels of importance in their daily life and levels of importance in their fields of work. They claimed that some skills in the items might be important in their occupations, but might be not in their daily life or vice versa.

After revising some parts of the questionnaires based on the experts' suggestions, the questionnaires were distributed to three piloted groups. This included 27 first-year undergraduate sports science students from March to May of the 2010 academic year, 20 people who worked in the fields of sports science, and 9 English teaching staff. All of these questionnaires were piloted in May 2011. After that, the reliability of the questionnaires was verified by using Cronbach's Alpha Coefficient. The values of the reliability were 0.93 for the student group, 0.9 for the teacher group, and 0.88 for the people who worked in the fields of sports science. The questionnaires were written in the Thai language in order to prevent the problems of language barriers.

2. Interview Protocol

The interview protocol was used to gain in-depth information beyond the data gathered from the questionnaires. The aim of the interviews was to gather in-depth

information about grammatical features and topic areas in sports science necessary for the web-based course development. There were three sets of the interviews, including the interview of first-year sports science students at Mahidol University, the interview of people who worked in the fields of sports science at Sports Authority of Thailand, and the interview of the English teaching staff who were responsible for the teaching and learning of English of sports science students. The sports science students were selected as the sample of the interview because in their regular course, they had to write English in paragraph levels as the requirement of the course. Therefore, it was expected that they would be able to describe their own problems in the use of English grammatical features and structures that caused difficulties in writing. For people who worked in the fields of sports science, they had the occupations that most of the sports science students were required to have after their graduation. The data, such as how much they used English in their daily life and their work experiences gained from this group of people were necessary for the web-based course development. For the group of English teaching staff, the interview was conducted with them in order to gain the data about the direction in the course development like from the chair of the English program, and problems in English grammatical errors that caused difficulties in writing as well as necessity of form-focused instruction and the web-based instruction which were collected from the course administrator and the English instructors. During the interviews, the interviewees were allowed to clarify the answers they gave in the questionnaires. To gain necessary data for the study, the semi-structured interviews were employed in order to give the interviewees more opportunities to express their opinions freely and openly. In this study, the individual interviews took approximately fifteen to twenty minutes depending on the interviewees' responses.

a) Interview with Sports Science Students

The semi-structured interview was conducted with 13 sports science students who volunteered to give information. It aimed to gather the data regarding (1) topics and levels of writing the students usually did in their traditional classroom, (2) types of grammatical items they had problems with when doing written assignments, (3) how much a clear and concise explanation in grammatical features taught by using themes in sports science as the context (form-focused instruction) helped them reduce errors in writing, and enhanced their grammatical competence and writing ability. All of

these data were used as the fundamental information for the web-based course development.

b) *Interview with People Who Worked in the Fields of Sports Science*

This group of interviewees included people who worked in the fields of sports science, such as coaches, physical education teachers, and sports science academicians. People in these occupations were selected as the sample of the interview since they worked in the fields that most of sports science students were expected to work in after their graduation. There were six interviewees who volunteered to give the information in this study. According to this number of interviewees, there were two coaches, two trainers, and two academicians in sports science. The interviewees were selected from the data resulting from the questionnaires. They were people who had to use the English language in their daily life and work. They also volunteered to give information and share their opinions about (1) the topic areas in sports science technologies needed in their professions, (2) the importance of writing abilities toward their jobs in general, and (3) the types of writing they usually experienced with, such as short notes, memos, summaries, official letters, and reports

c) *Interview with English Teaching Staff*

The final group of interviewees consisted of nine English teaching staff. This group consisted of the chair of the English Program, the course administrator, and seven English instructors who were responsible for the teaching and learning of English of sports science students at Mahidol University. For the chair of the English Program in particular, there were questions about the direction in the development of English courses, especially those for sports science students. For the course administrator, she was required to give information about course syllabus and its components, such as activities, lessons, and course evaluation used with sports science students. As for the English instructors, they were people who had direct experience with sports science students, so it was expected that they would be able to describe problems they had experienced from students' writing, such as (1) the English grammatical features and structures the students usually had problems with which affected their writing abilities and (2) their opinions about effectiveness of form-

focused instruction and web-based instruction toward grammatical competence and writing ability.

Validation of the Interview Questions

Before conducting the interviews, all of the questions used for these three sets of semi-structured interviews were validated by six experts. Three of them were the English instructors who had taught in the university level for more than 20 years and the other three were sports science academicians who had 10-year experience working in the fields of sports science. The interview questions for sports science students and those for English teaching stakeholders were validated by the experienced English instructors. For the interview questions used to elicit data from people who worked in the fields of sports science, these questions were validated by the sports science academicians. The questions that had the validation value less than the desired level were removed or revised to make them appropriate for the interviewees.

Based on the results of the IOC calculation, it was found that the questions in these three sets of semi-structured interviews reached acceptable levels of validity. The value of content validity of the interview questions for sports science students was 0.9. For the other two sets of questions, they had the value of content validity of 1.00 equally. The experts who validated the interview questions of the student group and the English teaching staff group also provided some suggestions that could be used to adjust and develop the interview questions to be clearer. They suggested that for both interviews, there should be questions asking about the duration of the web-based course teaching English grammar and writing which was considered appropriate for the students and the questions about other types of interesting activities that should be included in the web-based course. For the interview questions used with people who worked in the field of sports science, the experts in this field did not give any further suggestions or comments.

3.1.3 Data Collection Procedure

To obtain the data necessary for developing the web-based course which aimed at enhancing English grammatical competence and writing ability of first-year undergraduate sports science students, the data collection procedure was set as follows:

1. The questionnaires were distributed to all three participant groups. These participants included 83 first-year undergraduate sports science students at the College of Sports Science and Technology, Mahidol University, 47 people who worked in the fields of sports science at Sports Authority of Thailand, and nine English teaching staff which comprised the chair of the English program, the course administrator, and seven English instructors at Mahidol University. For the people who worked in the fields of sports science, because of the time constraint, the participants selected were people who were willing to give information and share their thoughts. For the participants in the student group and the English teaching staff group, since the numbers of these two groups were not too large, the researcher decided to collect data from all members.

2. The semi-structured interviews were set in order to gain deep understanding in the concepts of form-focused instruction and the web-based instruction as perceived by the participants. Firstly, the semi-structured interview was conducted with 13 first-year undergraduate sports science students at the College of Sports Science and Technology, Mahidol University, and then followed by six people who worked in the field of sports science technologies. This group included two coaches, two trainers, and two sports science academicians at Sports Authority of Thailand. The interviewees were recruited based on a voluntary basis. Also, they needed have the abilities to give some explanation and share their thoughts clearly. As for the final group, since the number of people in this group was too small, the researcher decided to include seven English instructors, the course administrator, and the chair of the English Program which was the same number as the questionnaire.

3.1.4 Data Analysis

The needs analysis process in this study combined two paradigms: quantitative and qualitative paradigms. The quantitative research instruments included the questionnaires for sports science students, people who worked in the fields of sports science, and the English teaching staff. The qualitative research instruments included questions used for semi-structured interviews. Moreover, the results obtained from the questionnaires were used to make some additional questions for the interviews. The data gained from the qualitative methods in turn were used to complement those earlier obtained from the quantitative methods in order to have better understanding in the two main concepts of the study, namely the form-focused instruction and the web-

based instruction. To have necessary information for the web-based course development, the data obtained from both the quantitative and qualitative research instruments were analyzed as follows:

1. Quantitative Research Instruments: Questionnaires

For these three sets of questionnaires, the data about demographic characteristics and background information of the participants were calculated by percentage and frequency count. In the parts that allowed the participants to rate their agreements and disagreements using five-point Likert scale or three-point scale items, the data were analyzed by using the descriptive statistics (mean and standard deviation). The Arithmetic mean was used to estimate the average level of agreements or disagreements of the participants in general. The standard deviation was used to find out how much variance there was in the mean. In the parts that allowed the participants to give their suggestions freely and openly, the data in these parts were analyzed by content analysis.

2. Qualitative Research Instruments: Semi-Structured Interviews

The data obtained from the semi-structured interviews were analyzed by content analysis. The counting frequencies of occurrence, such as topics of writing, levels of writing, themes in sports science, necessary grammatical items, problems in English writing of sports science students, advantages of form-focused and web-based instruction, and periods of time for web-based course study were counted as a tactic for generating meanings from the collected data (Miles and Huberman, 1994. To ascertain the accuracy of content analysis, there were two raters who verified the results of the analysis. One of the rater was the researcher and the other one was the English instructor who had taught English in the university level for twenty years. The data gained from the raters were calculated by the Independent-Samples T Test provided in the SPSS program to determine the inter-rater reliability. The values of the reliability were 0.9 for the student group, 0.87 for the group of sports science people, and 0.88 for the teacher group.

Table 3.1: Research Instruments Used for Data Collection in the Needs Analysis Process

Research Question 1	Instruments	Purposes of the Instrument	Validation	Data Analyzing Methods
What were the needs of Thai undergraduate sports science students and their stakeholders?	Questionnaires	To find out the overall needs and preferences of the three participant groups in developing the web-based course that was used to enhance grammatical competence and writing ability of first-year undergraduate sports science students	1. Have six experts validate the items on the questionnaires (three experienced English instructors and three experienced sports science academicians) 2. Pilot the questionnaires with the participants who have equivalent characteristics to those of the actual participants 3. Use Cronbach's Alpha Coefficient to verify the reliability of the questionnaires	1. Percentage and frequency count for the demographic data of the participants 2. Mean and standard deviation for five-point Likert scale or three-point scale items 3. Content analysis for the open-ended questions
	Semi-Structured Interviews	To gain in-depth information beyond the data gathered from the questionnaires	Have six experts validate the interview questions (three experienced English instructors and three experienced sports science academicians)	Content analysis

3.2 Course Design

The aim of this phase was to answer the research question number two regarding how the form-focused web-based instruction that aimed at enhancing English grammatical competence and writing ability was developed. The development in this phase comprised the web-based course development and how to use Web 2.0 technologies accompanying the web-based course. The data resulted from the needs analysis process were used to adjust some parts of the web-based course to be corresponded with the needs and preferences of the students.

3.2.1 Rationale

Grammatical knowledge plays a significant role toward the meaning and the quality of the written text. It not only helps the writer understand the conventions of Standard English but also reduces vernacular or Non-Standard English (Haussamen, Benjamin, Kolln, & Wheeler, 2003). Some grammatical features, like conjunctions, references, and tenses not only have their own functions, but they also enable a text to show some particular kinds of meanings (Schleppegrell, 1998). Meanwhile, Errors in using grammatical features can cause troubles in writing (Herrero, 2005: 22). Derived from this, grammar has been taught widely in school throughout the world, and one of the approaches that seems to work well with ESL and EFL students is explicit form-focused instruction (Hinkel, 2004; Spada, 1997). Explicit form-focused instruction provides clear explanations in using grammar, and that with a good comprehension in grammar usage, students will be able to write better. Especially when such instruction is transmitted through systematic technologies in the form of web-based instruction, this will facilitate learning and reinforce the explicit form-focused instruction

3.2.2 Goal and Objectives of the Web-Based Course

The goal and the objectives of the web-based course were set as follows:

Goal. By the end of the course, students will have developed the abilities to write with grammatically correct sentences in a paragraph level under the assigned topics.

Objective 1. Students will have an overall understanding of the English grammatical features and structures necessary for writing.

Objective 2. Students will be able to use the English grammatical features and structures to form a paragraph appropriately and accurately

Objective 3. Students will be able to write a well-organized and meaningful paragraph under the assigned topics.

Objective 4. Students will be able to identify and correct English grammatical errors.

3.2.3 Content Areas and Topics

There were eight topics related to sports science technologies on the web-based course using as the context for teaching the English grammar. Each contained a grammar point and its explanation through the video presentation provided for the students before doing the grammar and writing activities. The topics covered the subject matters in sports science, such as (1) types of sports, (2) ethics and legal in sports, (3) sports nutrition, (4) sports equipment, (5) sports marketing, (6) general aspects of sports science, (7) accidents and medical treatment, and (8) sports psychology. As shown in Figure 3.1, on the homepage, there were eight topics in sports science on the left side, and on the right side, there were some useful links to English grammar and writing games. Each topic consisted of four sections, such as video presentations, grammar lesson, and error recognition and cloze tests.
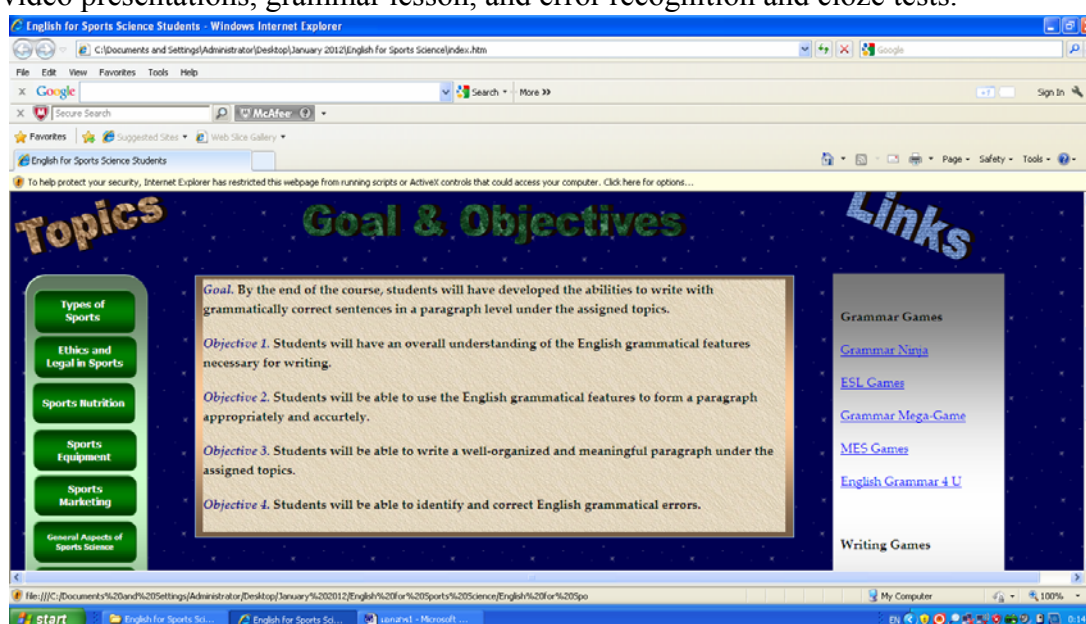
Figure 3.1: The Web Page on the Web-Based Course
Showing the Learning Sections

a) Video Presentations. The video presentations lasted for 20 minutes or half an hour depending on the contents. The instructor explained how to use some English grammatical features and structures by drawing the students' attention to examples of sentences from the passages in the content of sports science. After that, students could

check their comprehension in English grammar and structures by clicking on the exercise icons either "Cloze" or "Error Recognition." They could fill in the blanks using the given words in the parenthesis. When they finished the exercise, they could click on the icon "Check" to check the answers. If they had problems in using English grammatical features and structures, they could post or chat with the teacher or other classmates on Facebook.

b) Grammar Lessons. After listening to the lecture from the video presentations, students could access the grammar lessons to gain more comprehension in grammatical rules. In this part, there were some explanations about how to use some English grammatical features and structures alongside their examples.

c) Cloze and Error Recognition Tests. There were eight cloze tests and eight error recognition tests provided for students to examine their English grammatical comprehension on the web-based course. All of them were in the form of short paragraphs. There were blanks for students to fill in correct answers in the cloze tests while in the error recognition tests, students needed to identify the errors and typed the corrections in the blanks. However, if they had some difficulties in doing these exercises, they could discuss with the teacher or other peers on Facebook. They could post comments or suggestions about the exercises, some explanations and examples, and evaluation criteria on Facebook as well.

d) Diary Writing. There were some examples of good diary writing available on the web-based course. Students could view and use the examples to write their own pieces of writing on the weblog. When they posted their pieces of writing on the weblog, the teacher, other peers, or even outside readers could read their ideas and give comments or suggestions. They could use the comments or suggestions to improve their writing work. The students' pieces were evaluated by using the grading criteria adapted from the Faculty of Liberal Arts, Mahidol University. It comprised content (15 points), punctuation (10 points), paragraph organization (10 points) and grammar rules and usage (15 points). To ascertain the reliability of the scoring process, their pieces of writing were graded by two raters and then the scoring results were analyzed (inter-rater reliability co-efficient $\alpha = 0.88$ in the first piece of writing, $\alpha = 0.93$ in the second piece of writing, and $\alpha = 0.92$ in the third piece of writing).

However, if there was something unfair based on the evaluation process, the students could freely post their problems on Facebook.

e) Language Games. There were links on the right side of the homepage where students could click on a link to play games from other websites. There were both grammar games and writing games.

3.2.4 Computer Software Used in Developing the Web-Based Course

In this study, the web-based course was developed with several software programs, such as Microsoft FrontPage Version 2002, Windows Movie Maker, and Hot Potatoes Version 6. Microsoft FrontPage Version 2002 was used to create the website that held the pages, such as the home page, web pages of learning topics, grammar pages, and the contact page. For video presentations of the instructors, they were created by the program Windows Movie Maker. As for the activities on the web, such as multiple choices, cloze tests, and many others, they were developed by the program Hot Potatoes V.6.

3.2.5 Web 2.0 Technologies

The Web 2.0 technologies that were used alongside the web-based course were Facebook and weblog. Facebook allowed the students to chat, collaborate, and negotiate with their instructor and other peers about how to use English grammatical features and structures and how to solve their writing problems. They could share their interests and activities via bulletin boards, instant messaging, email, pictures, and videos through Facebook. Meanwhile, the weblog provided an online space for students to practice writing. The weblog allowed their instructor and other peers to view, give comments and suggestions, or rate their writing work. Such comments and suggestions could help them construct new knowledge in grammatical competence and writing ability, help instructors to improve their teaching methods, and help the course developer to rewrite some parts of the web-based course.

3.2.6 Lesson Plan

The lessons in the web-based course started with the video presentation. It explained how to use some grammatical points in context using examples both in sentence and paragraph levels in the themes of sports science. The objective of this activity was to teach grammatical points necessary for writing. The presentations took 20 minutes or half an hour depending on the topics of study. They could click on the

button "Grammar Lessons" to study English grammar again. Then the students were allowed to do various grammar activities on the web, such as cloze tests and error recognition tests. The time allotment for each activity was 15 minutes to half an hour approximately. Finally, students could view examples of diary writing and apply the ideas or sentence structures from such examples to write their own pieces of writing on the weblog. The objective of this activity was to check the students' comprehension in English grammar and their English writing ability after studying from the web-based course.

3.2.7 Evaluation

The students' progress and achievement in grammatical competence and writing ability were evaluated by both formative assessment and summative assessment. For the formative assessment, their progress in language was accessed by students' pieces of writing on the weblog and the worksheets of cloze and error recognition tests printed out from the website. Their competence in grammar and writing, such as numbers of grammatical errors, organizations of the paragraph, the ability to convey precise meanings, and many other writing abilities were analyzed. For the summative assessment, the students took the pre-test during the week prior to attending the web-based course and the post-test at the end of the course.

3.2.8 Validation

Before the web-based course was uploaded, its lessons were validated by three experts in the fields of English course development. After this validation stage, it uploaded and validated by three experts, comprising an English instructor who had taught students in the university level for 20 years, an academician who worked in the fields of sports science, and a computer programmer who was proficient in developing websites. The rubric used for calculating the course validity was derived from the evaluation framework "Integrating Evaluation Questions into the Framework" suggested by Baker (2003) (See Web-Based Course Evaluation in Chapter Two). In order to ascertain the content validity of the course, the course components, such as objective statements, types of web-based learning tools, learning activities, feedback mechanism, and a series of evaluations were validated by the Index of Item Objective Congruence (IOC). As a result of the calculation, the value of the content validity was 0.78. Then the data obtained in this part were calculated to find out internal

consistency of the web-based course by Kuder-Richardson Formula 20. The calculation of Kuder-Richardson Formula 20 is shown as follows:

$$KR20 = \frac{k}{k-1}\left[1 - \frac{\sum pq}{SDt^2}\right]$$

KR20 = Kuder-Richardson Formula 20 for the calculation of internal consistency

k = Number of items in the checklist evaluating the quality of the web-based course

p = Proportion of experts who agree with the item

q = Proportion of experts who disagree with the item

SDt = Standard deviation of the checklist evaluating the quality of the web-based course

In this study, the value of the internal consistency was 0.81. Apart from this, the experts were also expected to give some suggestions for the questions in the evaluation framework that require full answers such as "Which of the Bloom criterion is being addressed by the learning activities?" and "Are web-based learning tools used to deliver the course appropriate for the students?" They claimed that all of the Bloom criterion including knowledge, comprehension, application, analysis, synthesis, and evaluation were addressed in the web-based course. They gave reasons that the web-based course was a source of knowledge where students could learn and check their comprehension by doing the cloze and error recognition tests. The error recognition tests, especially, gave students more opportunities to analyze the passages. Students were allowed to apply what they had learned from the course to write pieces of writing on the weblog. They could get feedback from the teacher or peers to improve their writing. Since students were allowed to discuss with other people on Facebook, they could learn new ideas necessary for enhancing their grammar knowledge and writing ability. The experts also cited that the web-based learning tools used in this study were appropriate for students. Especially Facebook, they said that it should be included in the course because many students nowadays preferred chatting on Facebok.

3.2.9 Pilot Teaching

The web-based course was piloted with one group of first-year undergraduate sports science students (27 students) at the College of Sports Science and Technology, Mahidol University from March to May of the 2010 academic year. The students'

progress in their English grammatical competence and writing ability were examined using the gain scores from the worksheets printed out from the web-based course and their pieces of writing on the weblog. The scores of the worksheets showed that the students made progress in their English grammatical competence at the significant levels. There were statistically significant differences of the mean scores of both the cloze tests (F = 14.278; p = .000) and the error recognition tests (F = 41.838; p = .000). Moreover, not only did the students gain higher scores at the significant levels from the worksheets, but they also gained higher scores at the significant levels from three pieces of writing on the weblog (F = 14.301; p = .000). The students' writing errors decreased from 217 errors in the first pieces of writing, to 130 errors in the second pieces of writing to 67 errors in the third pieces of writing. This suggests that the students made progress in their English writing ability. In terms of summative assessment, the piloted group was assigned to take the pre-test before they started using the web and the post-test at the end of the course. The pre-test and the post-test were designed in an equivalent form with a little change in contents of the latter one in order to avoid the problem that the students would remember the answers from the pre-test instead of exactly measuring their performance. A statistically significant difference of the pre-test and post-test was found (t = 6.005, p = .000). The average values of item facility in the cloze tests were 0.45 in the pre-test and 0.48 in the post-test while those in the error recognition tests were 0.41 in the pre-test and 0.42 in the post-test. For the writing section, particularly, there were two raters who were required to evaluate the students' paragraph writing. The data gained from the raters were calculated by the Independent-Samples T Test to determine the inter-rater reliability. The values of inter-rater reliability were 0.93 for the pre-test and 0.92 for the post-test.

3.2.10 Course Implementation

After the web-based course was adjusted based on the results gained from the needs analysis process, the evaluation process of the three experts, and the pilot teaching, the actual course implementation were carried out during the first semester of the academic year 2011. The web-based course and the other two Web 2.0 technologies (Facebook and weblog) were employed with 83 first-year undergraduate sports science students at the College of Sports Science and Technology, Mahidol University. Actually, there were 86 students, but three of them dropped out from the

university, so there remained 83 students. The length of time of the web-based course was one semester (from June to September 2011). Each week during the course, the students were assigned to access the web-based course and do some activities at least one unit for each time. They also needed to report the scores they got from the activities to the instructor.

3.3 Form-Focused Web-Based Instruction

This phase aimed to answer the research question numbers three and four regarding the effects of the form-focused web-based instruction which comprised the web-based course and the Web 2.0 technologies and attitudes of first-year undergraduate sports science students toward the effectiveness of the instruction in enhancing their grammatical competence and writing ability. To determine the effectiveness of the instruction, the study was carried out with 83 first-year sports science students at the College of Sports Science and Technology, Mahidol University. The data were collected from pre-test and post-test, worksheets of cloze and error recognition tests printed out from the website, questionnaire, semi-structured interview, and students' pieces of writing on the weblog. The detailed information of the course evaluation process is described below:

3.3.1 Population and Sample

The population in this phase was first-year undergraduate sports science students at the College of Sports Science and Technology, Mahidol University. They studied English in the first semester of the academic year 2011. They were required to study English Level 1 as their compulsory course since they got the scores in the English language part less than 45 points based on the ONET results. They were at a low to mid-intermediate level of language competence. For the present study, since a number of students in this group were not too large, the researcher decided to include all of them as the sample of the study.

3.3.2 Participants

The participants in this phase included 83 first-year sports science students at the College of Sports Science and Technology, Mahidol University. In their normal course, they were allowed four hours per week to study the English language in the classroom and it lasted for 15 weeks. In this study, the students were required to

access the web-based course which offered eight topics for studying. The course lasted for one semester. Meanwhile, the other Web 2.0 technologies (Facebook and weblog) offered the students the opportunities to collaborate, discuss, negotiate, or chat with their instructor and peers about their learning on the web-based course. In addition, in order to avoid the problem that the students who received this type of instruction would gain more advantages over those who studied only in the traditional classroom, the researcher decided to include all of the students in this group.

3.3.3 Instruments of the Study

Based on the triangulation techniques, a study needs various instruments to ascertain the accuracy of the data. In this study, in order to determine the effectiveness of the form-focused web-based instruction, the researcher decided to choose the instruments, such as pre-test and post-test, worksheets of cloze and error recognition tests printed out from the website, questionnaire, semi-structured interview, and students' pieces of writing on the weblog.

1. Pre-Test and Post-Test

Derived from the pilot teaching, the pre-test and the post-test in this phase were adjusted in some parts to be appropriate for the first-year undergraduate sports science students at the College of Sports Science and Technology, Mahidol University. The tests were developed to find out the effectiveness of the form-focused web-based instruction toward the students' achievement in English grammatical competence and writing ability after receiving the treatment. The tests were designed in an equivalent form using the goals and objectives of the web-based course as the scope of the test; however, in order to avoid the practice effect, the content of the post-test was adjusted from the pre-test. The length of the time between the pre-test and the post-test took about four months. The time allotment for each test was one hour. The tests consisted of two main sections: grammar and writing. The total score of the tests was 100 points: 50 points each. In this study, both grammar recognition and grammar production were covered in the tests. Regarding grammar recognition, the grammar section consisted of two types of tests: the multiple-choice cloze tests and the error-recognition tests. Both types came in the form of short passages in the themes of sports science with 25 points each. In the multiple-choice cloze tests, the test takers needed to choose the English grammatical words or phrases from the multiple choices that fit with the passage. In

regards to grammar production, in the error-recognition tests, after the test takers identified erroneous words or phrases, they needed to revise them. This process promotes the students' grammar production since it evaluates their ability to formulate a correct answer by revising the erroneous ones by their own. For the writing part, the test takers had to write a paragraph with at least 100 words using the questions given as the clues to describe how to play and characteristics of their favorite sports for the pre-test and how to control their weight for the post-test.

The pre-test and the post-test in this phase were the criterion-referenced tests. Since they were such type of tests, the cut-off score was set at 65% as suggested by Brown (2005) that the cut-off score 60% or 70% was appropriate for the criterion-referenced tests. This study decided to choose the score between these two sets of scores based on his suggestion. To reach the cut-off score and gain the achievement in English grammatical competence and writing ability, it was expected that the students would be able to use correct grammatical features and structures necessary for writing in a paragraph level, and organize ideas that could be understandable. It was found that the students' cut-off score was 74% in the post-test which was higher than the pre-test which they gained only 61%. For the last required writing ability, the themes/topics in their subject matters in sports science were included in the tests because the researcher believed that the students would be able to write better if they had previous background knowledge about what they are going to write. The chosen topics were "My Favorite Sport" for the pre-test and "My Weight" for the post-test.

a) Test Construction

This study applied the three main stages: design stage, operationalization stage, and administration stage as suggested by Bachman and Palmer (1996) to develop the pre-test and the post-test.

1. Design Stage

The design stage comprised six components as follows:

1.1 Purpose of the tests. The purpose of the pre-test was to find out the students' background and grammatical competence and writing ability before attending the form-focused web-based instruction. For the post-test which was administered at the end of the course, it aimed to find out the students' achievement in grammatical competence and writing ability after receiving the treatment. The data

gained from both tests were compared by means of Paired-Samples T Test to find out the effectiveness of the form-focused web-based instruction in enhancing grammatical competence and writing ability.

1.2 TLU Domain and Task Type. The tests promoted the form-focused instruction and also used the themes/topics from the students' subject matters in their mainstream classrooms in both the cloze tests and error-recognition tests in the grammar section and the writing section. This is because the researcher believed that the students would be able to do the tests better if the themes in the tests were familiar to them.

1.3 Test Takers. The test takers in this phase were 83 first-year sports science students at the College of Sports Science and Technology, Mahidol University. Their English language ability was at low intermediate to mid intermediate. They were required to have the ability to write in a paragraph level with grammatically correct sentences based on the course requirement of the English Level 1 course, a compulsory course for first-year undergraduate students at Mahidol University.

1.4 Definition of the Constructs to be Measured. It was expected that by the end of the course, the students would be able to write in a paragraph level with grammatically correct sentences. To achieve this ability, the construct of the tests covered linguistic knowledge, textual knowledge, grammar knowledge, and topical knowledge. It was believed that linguistic knowledge, textual knowledge, and grammar knowledge were essential for writing and organizing the paragraph in an understandable way. For the topical knowledge, since the students were expected to write from the themes in their subject matters in sports science, the topical knowledge could help them display their understanding of the content through their writing.

1.5 A Plan for Evaluating the Qualities of Test Usefulness. The test usefulness comprises reliability, construct validity, authenticity, interactiveness, impact, and practicality. For the reliability, the results obtained from the two raters for each test were used to prove its reliability by Independent-Samples T Test to determine the inter-rater reliability. As for construct validity, in order to prove whether the tests measure English grammatical competence and writing ability, the students were assigned to write in a paragraph level and do the grammatical test in the form of the cloze and error-recognition tests which came in the forms of short passages instead of

testing the grammatical points as discrete points. Moreover, the tests also promoted authenticity and interactiveness. The content used for developing cloze and error-recognition tests in the grammar section were related to the content in their subject matters in sports science that the students were familiar with in the mainstream classrooms. For practicality or resources for test development, the researcher herself was the person who developed the pre-test and the post-test. Because of this, it was important to pilot the tests during the pilot teaching as mentioned in the earlier part of this chapter. The items in the grammar section were analyzed by item facility. The items that fell in a range between 0.30 and 0.70 were accepted to be included in the tests (Brown, 2005) while those less than this were revised. For the writing part, there were two raters who were assigned to evaluate the students' paragraph writing abilities. The data obtained from the raters were calculated by the Independent-Samples T Test provided in the SPSS program to determine the inter-rater reliability. For the impact of the tests, it was expected that if the scores from the post-test were higher than the pre-test with statistically significant differences, it could be claimed that the form-focused web-based instruction was useful in enhancing the students' English grammatical competence and writing ability. Regarding its effectiveness, the form-focused web-based instruction could be promoted to use in the educational institution. It can be adjusted to use with students from other faculties who have problems in learning the English language.

1.6. A Plan for their Allocation and Management. The time allotment for the pre-test and the post-test was one hour for each. The researcher proctored the tests by herself.

2. Operationalization Stage

The information gained from the design stage was used in the operationalization stage to create test specifications and test blueprint that showed how the test tasks were organized. The time allotment for the tests was one hour. The instructions were all in English. The test blueprint for the pre-test and post-test had two main sections for each: grammar and writing. The total score of the tests was 100 points for each. The grammar section was designed to measure the grammatical knowledge necessary for writing skills. The total score of this part was 50 points. It included one multiple-choice cloze test and one error-recognition test. The multiple-

choice cloze test contained 25 items with one point for each. Meanwhile, the error recognition test contained 15 items, but it had 25 points. In this test, there were 10 incorrect words or phrases on the passage that the students needed to identify and correct. Fifteen points were devoted to the ability to identify whether the items were correct or incorrect while the remained 10 points were devoted to the ability of test takers to correct the erroneous ones in the test. For the writing part, the total score of this part was 50 points. The test takers needed to write a paragraph with at least 100 words using the questions given as the clues to write about how to play some types of sports for the pre-test and how to control weight for the post-test. The scores were determined by the ability to write grammatically correct sentences and the ability to convey meanings and ideas in a well-organized paragraph.

3. Test Administration Stage

After distributing the tests to the students, the researcher gained both qualitative feedback from the semi-structured interview and the students' pieces of writing on the weblog and quantitative feedback from the scores resulted from the tests, worksheets printed out from the website, and the questionnaire. All of these data can be used to revise and develop the tests for the future study.

b) Test Validation

In this study, the test validation process was divided into two periods: priori construct validity and posteriori construct validity. The prior construct validity was carried out during the pilot teaching before administering the actual tests. Item facility was used to analyze the items in the grammar section of both the piloted pre-test and post-test. For the writing section, the score resulted from the two raters were calculated by the Independent-Samples T Test to determine the inter-rater reliability. The piloted tests were adjusted in some parts before the actual implementation. For the content validity of the tests, they were examined by three experts in the field of testing and assessment. Based on the results of the IOC calculation (Index of Item Objective Congruence), the values of content validity were 0.89 for the pre-test and 0.84 for the post-test.

Similarly, for the posteriori construct validity, item facility was used to analyze the items in the grammar part of both the pre-test and the post-test. For the writing

section, the scores resulted from the two raters were calculated by the Independent-Samples T Test to determine the inter-rater reliability.

2. Attitude Questionnaire

The attitude questionnaire aimed to find out the students' attitudes and collect data about their opinions toward the effectiveness of the form-focused web-based instruction in enhancing their grammatical competence and writing ability. The participants were 83 first-year undergraduate sports science students at the College of Sports Science and Technology, Mahidol University. The questionnaire consisted of the following four parts. As for five-point Likert scale items of the questionnaires, they were adapted from "Likert-Type Scale Response Anchors" suggested by Vagias (2006). Because most of the students had limited English background proficiency, to avoid miscommunication, the attitude questionnaire was written in the Thai language.

Part 1: Demographic Characteristic Data

The students were required to specify background information about ages, genders, educational levels, and number of years studying the English language as well as the times they accessed the web-based course, Facebook, and the weblog. They also had to estimate their levels of English language abilities in general, grammatical competence, and writing ability by using a five-point Likert scale ("excellent [4.5-5.0]," "very good [3.5-4.49]," "good [2.5-3.49]," "fair [1.5-2.49]," and "poor [1.0-1.49]").

Part 2: Effectiveness and Appropriateness of the Form-Focused Web-Based Instruction to Enhance their English Grammatical Competence and Writing Ability

The students were required to rate the levels of the effectiveness and appropriateness of the form-focused web-based instruction, such as the objectives and goals of the course, understandable presentations of the instructors, learning activities, web-based learning tools (video/audio clips), mechanism feedback provided for correcting the students' mistakes and giving them some suggestions/comments from the other two Web 2.0 technologies, like Facebook and weblog, and the evaluation process. The students needed to rate the levels of effectiveness using a five-point Likert scale which included "excellent" [4.5-5.0], "very good" [3.5-4.49], "good" [2.5-3.49], "fair" [1.5-2.49], and "requiring some improvement" [1.0-1.49]. As for levels of

appropriateness, they rated using a five-point Likert scale, such as "absolutely appropriate" [4.5-5.0], "appropriate" [3.5-4.49], "neutral" [2.5-3.49], "inappropriate" [1.5-2.49], and "absolutely inappropriate" [1.0-1.49].

Part 3: Students' Opinions toward their English Grammatical Competence and Writing Ability after Receiving the Treatment from Form-Focused Web-Based Instruction

The students were required to rate the levels of their grammatical competence and writing ability after receiving the treatment from the form-focused web-based instruction by using a five-point Likert scale ("much better [4.5-5.0]," "somewhat better [3.5-4.49]," "about the same [2.5-3.49]," "somewhat worse [1.5-2.49]," and "much worse [1.0-1.49]"). There were items eliciting data regarding their grammatical competence and writing ability.

Part 4: Suggestions and Expectations about the Future Development of the Web-Based Course

This part was optional. There were open-ended questions provided for the students to comment and give their suggestions about their grammar and writing problems in the English language in general, how much the form-focused web-based instruction could enhance their grammatical competence and writing ability, and their expectations about web-based instruction in the future.

Validation of the Attitude Questionnaire

Before distributing the attitude questionnaire, its content validity was be examined by three experts. Two of them are the English instructors who had taught in the university level more than twenty years and the other one was a computer programmer who was keen on developing websites. Based on the result of the IOC calculation (Index of Item Objective Congruence), the value of the content validity of the questionnaire was 0.89. The items that had validation value less than the desired level were revised and developed to ensure appropriateness for the participants of the studies.

After revising some parts of the attitude questionnaire based on the experts' suggestions, the questionnaire was distributed to one group of first-year undergraduate sports science students (27 students) at the College of Sports Science and Technology, Mahidol University during the second semester of the academic year 2010. After that,

the reliability of the questionnaire was verified by using Cronbach's Alpha Coefficient. The value of the reliability of the questionnaire was 0.92.

3. Semi-Structured Interview

Similarly, the semi-structured interview aimed to find out the attitudes of the students toward the effectiveness of the form-focused web-based instruction in enhancing their grammatical competence and writing ability in more details. In this phase, 13 students were interviewees. They were asked about the effectiveness and the appropriateness of objectives and goals of the course, the form-focused web-based instruction, the lessons and learning activities, video presentations, and Web 2.0 technologies (Facebook and weblog) to assist their learning from the web-based course, as well as additional information. The individual interviews took approximately fifteen to twenty minutes depending on the interviewees' responses.

Validation of the Semi-Structured Interviews

The interview questions were validated by three experts. Two of them were the English instructors who had taught in the university level for more than 20 years and the other one was a computer programmer who was keen on developing websites. The value of the content validity of the interview questions was 0.94.

4. Students' Pieces of Writing on the Weblog

Students' pieces of writing on the weblog were another instrument used in this phase in order to triangulate the findings obtained from the questionnaire and the semi-structured interview. They were used as the formative assessment to evaluate the students' learning progress in English grammatical competence and writing ability. In this study, the students were assigned to write about three stories on the weblog, such as "Introducing Myself," "My Hometown," and "My Life on Salaya Campus". They could also see the examples of good writing from the web-based course or view other examples from their peers' writing on the weblog.

Validation of the Instructions for Diary Writing

The content validity of the topics for writing was examined by three English instructors who had taught in the university level for more than 20 years. The values of content validity were 0.83 for the first topic, 0.79 for the second topic, and 0.82 for the last topic.

5. Worksheets of Cloze and Error Recognition Tests

The scoring data gained from the worksheets printed out from the web-based course were used to examine the students' progress in their English grammatical competence. There were eight cloze tests and eight error recognition tests. The cloze tests included the topics, such as outdoor sports, ethical responsibilities of a coach, carbohydrates, types of sports equipment, definition of sports marketing, subdisciplines in sports science, psychology and team controlling, and first aid. Meanwhile, the topics of error recognition tests included indoor sports, fair play, nutrients, a ball, jobs in sports management, four main streams in sports science, stress of sportsmen during the competition, and body testing.

Validation of the Worksheets

The content validity of the cloze and error recognition tests on the website was examined by three English instructors who had taught in the university level for more than 20 years. The average values of content validity were 0.91 for the cloze tests and 0.90 for the error recognition tests.

3.3.4 Data Collection Procedure

1. The pre-test was administered in the first week of June of the first semester of the academic year 2011 while the post-test was administered in the first week of October. The time allotment for each test was one hour.

2. During the course, the students were assigned to write three stories on the weblog in English in order to evaluate their progress in English grammatical competence and writing ability. Each student had to write at least 100 words for each piece of work and send it to the teacher once per month.

3. The students were also assigned to do the cloze and error recognition tests on the web-based course to check their progress in English grammatical competence. They were assigned to do four worksheets for each month (two cloze tests and two error recognition tests).

4. After analyzing the scores resulting from the pre-test and the post-test, the students' pieces of writing on the weblog, and the worksheets, the questionnaire was distributed to the students a week after finishing the course.

4. Finally, the semi-structured interview was employed a week after distributing the questionnaire.

3.3.5 Data Analysis

1. Pre-Test and Post-Test

In this phase, the scores of both the pre-test and the post-test were compared by means of Paired-Samples T Test in order to find out the effectiveness of the form-focused web-based instruction and determine the achievement of the students in English grammatical competence and writing ability after receiving the treatment. To make certain that the students could have improvement after receiving the treatment from the form-focused web-based instruction and had higher post-test scores which showed significant differences from the pre-test, it was expected that the value of Sig. (2-tailed) should be less than the value of α which was set at 0.05. Moreover, in order to ascertain that the higher post-test scores were exactly from the effectiveness of the form-focused web-based instruction, the effect size measurement was employed. Cohen's *d* was used in this study since it had advantages over other effect-size measurements. First, its quickly development and popularity made it become standard. Second, the effect sizes of 0.20 which were determined small, 0.50 medium, and 0.80 large could easily enable researchers to compare an experiment's effect-size results to known benchmarks (Cohen, 1992). In the study, the effect size of the study was 0.58. The formula of Cohen's *d* effect-size measurement is shown below:

$$d = \frac{\overline{x}_t - \overline{x}_c}{s_{pooled}}$$

d = Cohen's *d* effect size

x = mean (average of treatment or comparison conditions)

s = standard deviation

Subscripts t = the treatment condition and

Subscripts c = the comparison condition

2. Attitude Questionnaire

For the attitude questionnaire, the data in parts 1, 2, and 3 were analyzed by percentage and frequency count for the students' background information and the descriptive statistics (mean and standard deviation) for the five-point Likert scale items. It was expected that an effective instruction had an average mean higher than

3.5. For standard deviation, it was used to find out how much variance there was in the mean. Moreover, in the parts that allowed the students to give their suggestions and expectations about the form-focused web-based instruction, the data in this part were analyzed by content analysis. The counting frequency of occurrence, such as types of interesting activities, web-based course designs, usefulness of Web 2.0 technologies (Facebook and weblog), and additional information were counted as a tactic for generating meaning from the collected data.

3. Semi-Structured Interview

After the semi-structured interview was conducted, the data from the electronic recorder were transcribed and then analyzed by content analysis. The students' attitudes toward the effectiveness and appropriateness of goals and objectives of the course, advantages of the form-focused web-based instruction (web-based course, Facebook, and weblog), the lessons and learning activities, video presentations, games, and additional information were categorized and compared as a tactic for generating meaning from the collected data.

4. Students' Pieces of Writing on the Weblog

To find out the students' progress in English grammatical competence and writing ability, the number of word errors found in the three assigned topics were counted and graded. The grading criteria were adapted from the Faculty of Liberal Arts, Mahidol University. It comprised content (15 points), punctuation (10 points), paragraph organization (10 points) and grammar rules and usage (15 points). The gain scores were analyzed by using One-Way ANOVA and Post Hoc Tests to find out statistically significant differences. Moreover, to ascertain the accuracy of content analysis, there were two raters who verified the results of the analysis. One of the rater was the researcher and the other one was the English instructor who had taught English in the university level for twenty years. The data gained from the raters were calculated by the Independent-Samples T Test provided in the SPSS program to determine the inter-rater reliability (inter-rater reliability co-efficient $\alpha = 0.88$ in the first piece of writing, $\alpha = 0.93$ in the second piece of writing and $\alpha = 0.92$ in the third piece of writing).

5. Worksheets of Cloze and Error Recognition Tests

The scoring data gained from the worksheets printed out from the web-based

course were analyzed by using One-Way ANOVA and Post Hoc Tests to find out statistically differences significant enough to prove that the students could make progress in their English grammatical competence.

Table 3.2: Research Instruments Used for Evaluating the Effectiveness of the Form-Focused Web-Based Instruction Regarding the Students' Progress in Grammatical Competence and Writing Ability

Research Question	Instruments	Purposes of the Instruments	Validation	Data Analyzing Methods
What were the effects of the form-focused web-based instruction on the sports science students' English grammatical competence and writing ability?	Pre-test and Post-test	To find out the students' abilities in grammar and writing before and after receiving the treatment of the form-focused web-based instruction	1. Pilot the pre-test and post-test with the participants who have equivalent characteristics to those of the actual participants 2. Calculate the item facility for multiple choices 3. Have two raters evaluate paragraph writing of the students in the piloted group 4. Use Independent-Samples T Test to determine the inter-rater reliability	1. Paired-Samples T Test to find out statistically significant differences 2. Effect size measurement Cohen's d to find out the value of effect size
	Students' pieces of writing on the weblog	To evaluate the students' learning progress in grammatical competence and writing ability	1. Have three English instructors validate the topics for writing 2. Use Independent-Samples T Test to determine the inter-rater reliability	1. Frequency of counting word errors 2. One-Way ANOVA and Post Hoc Tests to find out statistically significant differences
	Worksheets of cloze and error recognition tests	To evaluate the students' learning progress in grammatical competence	Have three English instructors validate the worksheets	Use One-Way ANOVA and Post Hoc Tests to find out statistically significant differences

Table 3.3: Research Instruments Used for Evaluating the Effectiveness of the Form-Focused Web-Based Instruction Regarding the Students' Attitudes toward the Instruction

Research Question	Instruments	Purposes of the Instruments	Validation	Data Analyzing Methods
What were the attitudes of sports science students toward the form-focused web-based instruction?	Attitude Questionnaire	To collect data about the students' attitudes toward the effectiveness of the treatment of the form-focused web-based instruction in enhancing their grammatical competence and writing ability	1. Have three experts validate the items on the questionnaire (Two experienced English instructors and one computer programmer) 2. Pilot the questionnaire with the students who have equivalent characteristics to the sports science students 3. Use Cronbach's Alpha Coefficient to calculate the reliability of the questionnaire	1. Percentage and frequency count for the demographic data of the participants 2. Mean and standard deviation for five-point Likert scale items 3. Content analysis for the open-ended questions
	Semi-Structured Interview	To gain in-depth information beyond the data gathered from the pre-test and post-test, pieces of writing on the weblog, worksheets, and the questionnaire	Have three experts validate the interview questions (Two experienced English instructors and one computer programmer)	Content analysis

3.4 Conclusion

The research methodology comprised three main stages, such as needs analysis, the form-focused web-based instruction development, and evaluation of the effectiveness of the form-focused web-based instruction. Needs analysis was conducted through questionnaires and semi-structured interviews in order to gather the data about the direction in the development of the web-based course that was used alongside the Web 2.0 technologies, like Facebook and the weblog. Finally, the form-focused web-based instruction was evaluated by various instruments to make certain about the effectiveness of the instruction. The instruments in this phase included pre-test and post-test, attitude questionnaire, semi-structured interview, students' pieces of writing on the weblog, and worksheets printed out from the web-based course.

CHAPTER IV
RESULTS

This chapter presents the results of the study in response to the research questions as listed in the following topics:

1. Needs of Thai undergraduate sports science students and stakeholders

2. Course design

3. Effects of the form-focused web-based instruction to enhance English grammatical competence and writing ability of sports science students

4. Attitudes of sports science students toward the form-focused web-based instruction to enhance English grammatical competence and writing ability

5. Summary of the findings

4.1 Needs of Thai Undergraduate Sports Science Students and Stakeholders to Enhance English Grammatical Competence and Writing Ability

Research Question 1: What were the needs of Thai undergraduate sports science students and their stakeholders?

The sets of questionnaires and the interview protocols for three participant groups (sports science students, English teaching staff, and people who worked in the fields of sports science) were used as the research instruments to answer the research question number one. These three groups included 83 first-year undergraduate sports science students at the College of Sports Science and Technology, Mahidol University, nine English teaching staff, and 47 people who worked in the fields of sports science at Sports Authority of Thailand. All of them completed the research instruments. The results gained from the questionnaires and the interviews are described below:

4.1.1 Questionnaire

a) Background Information and Opinions of Sports Science Students

Part 1: Demographic Characteristic Data

All of the participants in this group were first-year undergraduate students at the College of Sports Science and Technology, Mahidol University. The data were

collected in the first semester of the 2011 academic year. Sixty-one participants were male (73.5%) and 22 were female (26.5%). Most of them (62.7 %) were between 18 and 19 years old. All of them (100%) got high school diplomas. Most of them (61.5%) had studied English for 14 years. More than half of them (53%) got the C grade in English. When asking about their experience in English writing, most of them (69.9%) had experience in writing in the paragraph level, while approximately one-third of them (30.1%) did not. As for their English grammatical competence and writing ability, almost half of them (44.6%) reported that they had fair competence.

With respect to their readiness for the Internet usage, most of the students (66.3%) surfed the Internet everyday. However, only a few of them (6%) visited language teaching websites everyday. More than half of them (59%) never accessed language teaching websites, while the rest of them (35%) visited the websites once in a while. Concerning their abilities to use social networking, almost all (97.6%) used Facebook and 8.4% used weblog. As for the places where they surfed the Internet, nearly half of the students (49.4%) surfed the web at home. The demographic characteristic data are summarized in Table 4.1.

Table 4.1: Demographic Characteristics of the Sports Science Students

Demographic Characteristics Data	Number	Percentage
Sex		
Male	61	73.5
Female	22	26.5
Age (years)		
18 years	33	39.8
19 years	19	22.9
20 years	14	16.9
21 years	13	15.7
22 years	4	4.8
Academic Year		
1st year	83	100
Semester		
One	83	100
Two		
Major		
Sports Science and Technology	42	50.6
Exercises and Technology	41	49.4
Highest Level of Education		
High School	83	100
Number of Years Studying English		
12 years	12	14.5
13 years	4	4.8
14 years	51	61.5
15 years	12	14.5
16 years	4	4.8

Table 4.1: Demographic Characteristics of the Sports Science Students (Continued)

Demographic Characteristics Data	Number	Percentage
English Grade		
A	7	8.4
B	15	18.1
C	44	53
D	17	20.5
Experience in English Writing		
Yes	58	69.9
No	25	30.1
Self-Rated Ability in English Writing		
Very Good	4	4.8
Good	19	22.9
Fair	37	44.6
Poor	23	27.7
Frequency of Their Internet Access		
Everyday	55	66.3
1 to 5 times a week	26	31.3
6 to 10 times a week	2	2.4
Frequency of Accessing to English Teaching Websites		
Everyday	5	6
1 to 3 times a week	10	12
1 to 10 times a month	14	16.9
3 to 12 times a year	5	6
Never	49	59
Ability to Use Social Networking		
Facebook	81	97.6
Weblog	7	8.4
Hi5	22	26.5
Twitter	10	12.1
Place for Their Internet Use		
Home	41	49.4
University	33	39.8
Laptop	28	33.7
Internet Cafe	1	1.2

Part 2: English Grammatical Features and Structures Necessary for Writing Ability

This part shows the English grammatical features and structures which were considered as important factors for enhancing writing ability. The students needed to rate the levels of importance of English grammatical features and structures necessary for writing. According to the questionnaire results, the students thought that word order (Mean = 4.13; SD = 0.87) was the most important English grammatical feature, followed by nouns (Mean = 4.11; SD = 0.83), verbs (Mean = 4.11; SD = 0.84), verb tenses (Mean = 4.10; SD = 0.86), articles and determiners (Mean = 4.02; SD = 0.81), pronouns (Mean = 4.02; SD = 0.88) active and passive voices (Mean = 4.00; SD =

0.91), and types of sentences (Mean = 4.00; SD = 0.88). The data of the English grammatical features and structures which the students regarded as necessary for enhancing writing ability are summarized in Table 4.2.

Table 4.2: English Grammatical Features and Structures Necessary for Writing Ability

English Grammatical Features and Structure	Mean	SD
Articles (a, an, the) and Determiners (this, that, these, those, my, her, his, our, their, your, its)	4.02	0.81
Pronouns	4.02	0.88
Adverbs	3.83	0.84
Adjectives	3.87	0.87
Nouns	4.11	0.83
Verbs (modal verbs, auxiliary verbs, verbs)	4.11	0.84
Verb Tenses	4.10	0.86
Infinitive and Gerund	3.95	0.82
Prepositions	3.77	0.86
Coordinating Conjunctions	3.84	0.94
Relative Clauses and Relative Pronouns (who, which, that, etc)	3.90	0.93
Comparatives and Superlatives)	3.81	0.90
Active and Passive Voices	4.00	0.91
Reported Speech	3.77	0.94
Subject-Verb Agreements	3.87	0.84
Word Order	4.13	0.87
Phrases (noun phrases, verb phrases, prepositional phrases, etc.)	3.99	0.92
Types of Sentences (simple, compound, and complex sentences) and Clauses (dependent clauses and independent clauses)	4.00	0.88
IF-Clauses	3.77	0.91
Run-on Sentences and Fragments	3.89	0.87

Part 3: Topic Areas Necessary for the Students' Academic Areas of Study

This part reports the topic areas which were considered necessary for sports science students. In this study, eight topic areas chosen most were used as the themes for teaching English grammatical competence and writing ability. This part comprises four groups of sports science subjects: types of sports, general education for sports science, science and mathematics for sports science, and special subjects for professions in sports science. In each subject group, the students needed to rate the levels of importance of the topic areas both in their everyday lives and future professions. Based on the questionnaire items asking about types of sports, the students thought that martial arts (Mean = 4.17; SD = 1.02) and swimming (Mean = 4.13; SD = 0.95) were the most important sports for their everyday lives. As for their professions, they rated swimming (Mean = 4.30; SD = 0.88) as the most important sport, followed by aerobic dance (Mean = 4.22; SD = 1.00), yoga (Mean = 4.22; SD =

0.99), and martial arts (Mean = 4.08; SD = 1.07). The data of the levels of importance of sports in their everyday lives and professions are summarized in Table 4.3.

Table 4.3: Importance of Sports in Everyday Lives and Professions

Types of Sports	Everyday Lives		Professions	
	Mean	SD	Mean	SD
Swimming	4.13	0.95	4.30	0.88
Rowing	2.43	0.98	2.98	1.15
Track Athletics	3.16	1.13	3.53	1.17
Field Athletics	2.69	0.99	3.29	1.15
Football	3.42	1.17	3.93	1.11
Rugby Football	2.59	1.02	3.12	1.17
Basketball	3.23	1.10	3.69	1.20
Volleyball	2.93	1.06	3.49	1.20
Sepak Takraw	2.71	1.10	3.22	1.24
Petanque	2.69	1.09	3.13	1.23
Martial Arts	4.17	1.02	4.08	1.07
Taekwondo	3.71	1.19	3.99	1.14
Judo	3.57	1.13	3.82	1.15
Thai Boxing	3.82	1.18	3.82	1.23
Swordplay	3.18	1.22	3.30	1.30
Fencing	2.96	1.22	3.25	1.30
Tennis	3.18	1.19	3.89	1.16
Table Tennis	2.98	0.94	3.40	1.04
Badminton	3.28	1.04	3.84	0.97
Gymnastics	3.13	1.07	3.70	1.06
Rhythmic Sportive Gymnastics	2.90	1.16	3.46	1.14
Aerobic Dance	3.72	1.19	4.22	1.00
Yoga	3.87	1.16	4.22	0.99
Social Dance	3.04	1.17	3.53	1.17

As regards general education for sports science, the students thought that general aspects of sports science (Mean = 4.25; SD = 0.78) and general aspects of sports medicine (Mean = 4.20; SD = 0.84) were the most important subjects for their everyday lives. Similarly, when rating the importance for their professions, they also rated general aspect of sports science (Mean = 4.61; SD = 0.71) as the most important subject. The data of the levels of importance of general education for sports science are summarized in Table 4.4.

Table 4.4: Importance of General Education for Sports Science in Everyday Lives and Professions

General Education for Sports Science	Everyday Lives		Professions	
	Mean	SD	Mean	SD
General Aspects of Sports Science	4.25	0.78	4.61	0.71
General Aspects of Sports Medicine	4.20	0.84	4.57	0.72
Sports Science Terminology	4.14	0.90	4.59	0.70
Philosophy, Ethics, and Legal Aspects of Sports	4.08	0.98	4.47	0.74

Table 4.4: Importance of General Education for Sports Science in Everyday Lives and Professions (Continued)

General Education for Sports Science	Everyday Lives		Professions	
	Mean	SD	Mean	SD
Sports Information and Illustration	3.95	0.87	4.46	0.80
Microcomputer Application and Information Technology in Sports	4.01	0.92	4.51	0.74
Statistics and Research Methodology for Sports Science	3.88	1.00	4.41	0.83

With respect to science and mathematics for sports science, the students thought that basic anatomy (Mean = 4.12; SD = 0.85) was the most important subject for their everyday lives. Likewise, for their professions, they also rated basic anatomy (Mean = 4.51; SD = 0.69) as the most important subject in science and mathematics for sports science. The data of the levels of importance of subjects in science and mathematics for sports science are summarized in Table 4.5.

Table 4.5: Importance of Science and Mathematics for Sports Science in Everyday Lives and Professions

Science and Mathematics for Sports Science	Everyday Lives		Professions	
	Mean	SD	Mean	SD
General Chemistry	3.30	0.91	3.75	0.95
Introductory Biology	3.57	0.94	4.01	0.86
Biochemistry for Sports Science	3.75	0.96	4.10	0.91
Mathematics	3.43	1.04	3.82	1.03
Basic Physiology	4.04	0.93	4.41	0.83
Basic Anatomy	4.12	0.85	4.51	0.69
Laboratory in Basic Medical Science	3.84	0.99	4.31	0.88

Referring to special subjects for professions in sports science, the students thought that first aid and resuscitation (Mean = 4.51; SD = 0.76) and sports injuries and rehabilitation (Mean = 4.51; SD = 0.74) were the most important special subjects for their everyday lives. Similar to this, they also rated first aid and resuscitation (Mean = 4.70; SD = 0.58) as the most important special subjects for their professions followed by sports injuries and rehabilitation (Mean = 4.63; SD = 0.64), physical fitness training (Mean = 4.63; SD= 0.66), sports nutrition (Mean = 4.63; SD = 0.60), and sports psychology (Mean = 4.63; SD = 0.62). The data of the levels of importance of special subjects for professions in sports science are summarized in Table 4.6.

Table 4.6: Importance of Special Subjects for Professions in Sports Science in Everyday Lives and Professions

Special Subjects for Professions in Sports Science	Everyday Lives		Professions	
	Mean	SD	Mean	SD
Scientific Principles of Sports Training	4.18	0.89	4.52	0.79
Sports Technology	4.18	0.86	4.51	0.76
Motor Learning	4.30	0.82	4.55	0.72
Applied Anatomy in Sports Science	4.20	0.87	4.59	0.73
Physical Fitness Training	4.29	0.82	4.63	0.66
Physiology of Exercise	4.20	0.87	4.61	0.64
First Aid and Resuscitation	4.51	0.76	4.70	0.58
Sports Injuries and Rehabilitation	4.51	0.74	4.63	0.64
Sports Pharmacology	4.14	0.90	4.52	0.74
Sports Hygiene	4.20	0.84	4.48	0.74
Sports Nutrition	4.40	0.78	4.63	0.60
Sports Psychology	4.23	0.86	4.63	0.62
Basic Recreation, Equipment, and Facilities in Sports	4.17	0.79	4.45	0.70
Sports for Special Groups, such as sports for disabilities	3.94	1.05	4.45	0.72

Part 4: Necessity of the Teaching Methods in the Development of the Students' Grammatical Competence and Writing Ability

This part reports the students' opinions toward the advantages of grammar instruction to English writing ability, advantages of using content matters in sports science as the context for study, and advantages of web-based instruction. It aimed to find out whether form-focused web-based instruction was worth being developed for the students. The students needed to rate the levels of advantages of these types of instruction. According the questionnaire items eliciting data about the advantages of grammar instruction to English writing, the students agreed that grammar instruction helped them use the language in a standard way (Mean = 4.24; SD = 0.69) and understand meanings of communication in general (grammar helped synthesize contents and had an effect on other language skills which were concerned with learners' communication) (Mean = 4.20; SD = 0.66). The data of the students' opinions toward the advantages of grammar instruction in English writing are summarized in Table 4.7.

Table 4.7: Students' Opinions toward the Advantages of Grammar Instruction in English Writing

Advantages of Grammar Instruction in English Writing	Mean	SD
Understand meanings of communication in general. Grammar helps synthesize contents and has an effect on other language skills which are concerned with learners' communication.	4.20	0.66
Learn language better and faster	4.04	0.74
Use language in a standard way	4.24	0.69
Communicate and interpret contents of study accurately and appropriately	4.18	0.70
Reduce writing errors	4.14	0.77
Develop writing abilities in general. Learners can check and correct their own writing errors.	4.18	0.73
Have confidence in writing. Learners can add, omit, replace, or combine words, phrases, clauses, and sentences in a paragraph correctly and appropriately	4.14	0.81
Enhance analytical abilities so that learners can find meanings, roles of sentences, and purposes of pieces of writing efficiently	4.18	0.72
Choose appropriate words to create sentences and paragraphs correctly, appropriately and easily	4.19	0.72

With respect to the advantages of using content matters in sports science as the context for study, the students agreed that with the availability of context, they were able to learn both content matters and the English language at the same time (Mean = 4.20; SD = 0.78). They thought that they were able to write sentences and paragraphs correctly to suit the context and with purpose of writing (Mean = 4.19; SD = 0.76). The data of the students' opinions toward the advantages of using content matters in sports science as the context for study are summarized in Table 4.8.

Table 4.8: Students' Opinions toward the Advantages of Using Content Matters in Sports Science as the Context for Study

Advantages of Using Content Matters in Sports Science as the Context for Study	Mean	SD
Learn both content matters and the English language at the same time	4.20	0.78
Learn and develop writing skills from the contents they need in use in their everyday lives	4.16	0.76
Enhance enthusiasm to learn language and make their English learning not boring	4.05	0.82
Enhance analytical skills in academic and social contexts	4.07	0.82
Encourage learners to use knowledge or anything they have learned to apply for use in their writing	4.13	0.79
Know writing direction	4.05	0.75
See how to use some grammatical items and how they are changed to suit context	4.18	0.72
Learn grammar accompanying with vocabulary, paragraph organization, communicative skills, and writing techniques at the same time	4.14	0.75
Write sentences and a paragraph correctly based on the context and purposes of writing	4.19	0.76

As for the advantages of web-based instruction, the students agreed that such the instruction allowed them to learn English writing from several types of media,

such as videos, slides, and other multimedia (Mean = 4.20; SD = 0.87). They agreed that web-based instruction could reduce gaps of time and distance (Mean = 4.19; SD = 0.77) and allowed them to exchange thoughts or discuss about problems in writing through social networking sites, like Facebook, weblog, and other media (Mean = 4.19; SD = 0.79). The data of the students' opinions toward the advantages of web-based instruction are summarized in Table 4.9.

Table 4.9: Students' Opinions toward the Advantages of Web-Based Instruction

Advantages of Web-Based Instruction	Mean	SD
Develop a learning network	4.16	0.74
Emphasize learner centeredness	4.02	0.76
Reduce gaps of time and distance	4.19	0.77
Save expenses for learning and travelling. Learners can learn online lessons at home.	4.14	0.90
Promote acquisition and make learning language not boring	3.92	0.94
Learn English writing from several types of media, such as videos, slides, and other multimedia	4.20	0.87
Do exercises and check answers immediately	4.02	0.87
Exchange thoughts, discuss about problems in writing through social networking, like Facebook, weblog, and other media	4.19	0.79
Learn English wring from authentic resources	3.99	1.01

Part 5: Suggestions for the Development of the Web-Based Course

Out of the total of eighty-three participants, there were eight participants who provided some useful suggestions for the development of the web-based course. They suggested that there should be some videos teaching English grammar and games available on the web-based course because they could reduce their stress in learning. They reported that there should be a language learning website for students to use indefinitely. However, there should not be time restriction when students were doing exercises on the web and feedback should be given within a short time after they had finished the exercise. Apart from this, one of them reported that there should be some online technologies which could be used alongside the web-based course:

> *"Since the course focuses on using technologies for learning, there should be some other online technologies like Facebook that students can use to contact with the teacher when they are doing exercises on the web-based course."*

b) Background Information and Opinions of People Who Worked in the Fields of Sports Science

Part 1: Demographic Characteristic Data

The findings showed that close to half of the participants (48.9%) in this group were male and (51.1%) were female. Concerning ages, most of them (68.1%) were

between 23 and 25 years old. In terms of education, most of them (89.4%) graduated with a bachelor's degree. As regards their current occupations, almost half of them (44.7%) were physical education teachers, 31.9% were sports science academicians, 12.8% were coaches, and 10.6% were trainers. It was found that almost three quarters (74.5%) had worked in the fields of sports science for one to five years.

When asked about the necessity of English skills to their professions and everyday lives, more than half of them (59.6%) thought that the English language were very important in their professions. With regard to their everyday lives, almost half of them (40.4%) thought that the English language was moderately important. Concerning their ability in the use of English in their professions, most of them rated themselves as good users (38.3%) and fair users (38.3%). Similar to their ability in the English language in everyday lives, most of them (42.6%) also rated themselves as fair users.

As for the amount of problems caused by the lack of sufficient English language skills in general, more than half of them (66%) cited that they sometimes got the language problems in their professions and 63.8% sometimes got the problems in their everyday lives. As for writing skills, half of them (55.3%) cited that they sometimes got the English writing problems in their professions and 55.3% cited that they sometimes got the problems in their everyday lives. As for the levels of their English writing abilities, 51.1 % rated themselves as fair writers in their professions and 48.9% rated themselves as fair writers in their everyday lives.

When considering the necessity of writing skills with other language skills in their professions, most of them (61.7%) thought that it was as equally important as listening, 48.9% as equally important as reading and speaking, 19.2% more important than reading, 8.5% more than listening, and another 8.5% more than speaking. As for the importance of writing skills for everyday lives, more than half of them (57.5%) thought that writing was as equally important as listening, 53.2% as equally important as reading and speaking, 12.8% more important than reading, 10.6% more than speaking, and 6.4% more than listening. The demographic characteristics data are shown in Table 4.10.

Table 4.10: Demographic Characteristics of the People Who Worked in the Fields of Sports Science

Demographic Characteristics Data	Number	Percentage
Sex		
Male	23	48.4
Female	24	51.1
Age (years)		
23 to 25 years	32	68.1
26 to 30 years	4	8.5
31 to 37 years	8	17
45 to 47 years	3	6.4
Educational Background		
Vocational Degree	2	4.3
Bachelor's Degree	42	89.4
Master's Degree	2	4.3
Doctoral Degree	1	2.1
Current Occupations		
Sports Academicians	15	31.9
Physical Education Teachers	21	44.7
Coaches	6	12.8
Trainers	5	10.6
Number of Years Working in the Fields of Sports Science		
1 to 5 years	35	74.5
6 to 12 years	6	12.8
20 to 24 years	6	12.8
Necessity of English in their Professions		
Extremely Important	3	6.4
Very Important	28	59.6
Moderately Important	11	23.4
Slightly Important	3	6.4
Not At All Important	2	4.3
Necessity of English in their Everyday Lives		
Extremely Important	6	12.8
Very Important	15	31.9
Moderately Important	19	40.4
Slightly Important	5	10.6
Not At All Important	2	4.3
Self-Rated Ability in English for their Professions		
Excellent	2	4.3
Very Good	5	10.6
Good	18	38.3
Fair	18	38.3
Poor	4	8.5
Self-Rated Ability in English for their Everyday Lives		
Excellent	1	2.1
Very Good	4	8.5
Good	18	38.3
Fair	20	42.6
Poor	4	8.5
Frequency of Times They Got Problems in English in their Professions		
Very Frequently	1	2.1
Frequently	4	8.5
Sometimes	31	66
Rarely	9	19.2
Never	2	4.3

Table 4.10: Demographic Characteristics of the People Who Worked in the Fields of Sports Science (Continued)

Demographic Characteristics Data	Number	Percentage
Frequency of Times They Got Problems in English in their Everyday Lives		
Very Frequently	1	2.1
Frequently	5	10.6
Sometimes	30	63.8
Rarely	9	19.2
Never	2	4.3
Frequency of Times They Got Problems in English Writing Skills in their Professions		
Very Frequently	2	4.3
Frequently	8	17
Sometimes	26	55.3
Rarely	9	19.2
Never	2	4.3
Frequency of Times They Got Problems in English Writing Skills in their Everyday Lives		
Very Frequently	0	0
Frequently	9	19.2
Sometimes	26	55.3
Rarely	10	21.3
Never	2	4.3
Self-Rated Ability in English Writing in their Professions		
Excellent	2	4.3
Very Good	0	0
Good	18	38.3
Fair	24	51.1
Poor	3	6.4
Self-Rated Ability in English Writing in their Everyday Lives		
Excellent	0	0
Very Good	2	4.3
Good	18	38.3
Fair	23	48.9
Poor	4	8.5
Necessity of Writing Ability in Comparisons with Other Skills in their Professions		
Reading		
More Important	9	19.2
Equally Important	23	48.9
Less Important	15	31.9
Listening		
More Important	4	8.5
Equally Important	29	61.7
Less Important	14	29.8
Speaking		
More Important	4	8.5
Equally Important	23	48.9
Less Important	20	42.6
Necessity of Writing Ability in Comparisons with Other Skills in their Everyday Lives		
Reading		
More Important	6	12.8
Equally Important	25	53.2
Less Important	16	34

Table 4.10: Demographic Characteristics of the People Who Worked in the Fields of Sports Science (Continued)

Demographic Characteristics Data	Number	Percentage
Listening		
More Important	3	6.4
Equally Important	27	57.5
Less Important	17	36.2
Speaking		
More Important	5	10.6
Equally Important	25	53.2
Less Important	17	36.2

Part 2: Types of Writing Found in Everyday Lives and Professions in Sports Science

This part reports the types of writing that the participants found in their everyday lives and professions in sports science. The participants reported that they found filling-in forms, such as work contracts and application forms, most in both their everyday lives (Mean = 3.40; SD = 1.05) and professions in sports science (Mean = 3.23; SD = 1.02). The data of the levels of the frequency of writing work they found in their everyday lives and professions in sports science are summarized in Table 4.11.

Table 4.11: Frequency of Types of Writing the People who Worked in the Fields of Sports Science Found in their Everyday Lives and Professions

Types of Writing	Everyday Lives		Professions	
	Mean	SD	Mean	SD
Filling in forms, such as work contracts, application forms, etc.	3.40	1.05	3.23	1.02
Notes, such as short notes, reports, writing about opinions, writing contact and order, etc.	3.02	1.06	3.00	1.00
Summarization	2.81	1.10	2.67	1.08
Articles	2.73	1.12	2.88	1.18
Slogans	2.65	1.08	2.65	1.14
Projects	2.75	1.16	2.77	1.31
Letters, such as application letters, ordering, questionnaire, etc.	3.25	1.34	2.94	1.26
Governmental letters	2.77	1.13	2.77	1.08
Public relation letters	2.90	1.22	2.69	1.17
Inviting Letters for Meetings	2.69	1.11	2.65	1.14
Reports, such as meeting reports, reports about sports practice, reports about the athletes' injuries, etc.	2.79	1.11	3.06	1.08

Part 3: Topic Areas in Sports Science

This part reports the topic areas which were considered necessary for the sports science disciplines from the points of view of people who worked in the fields of sports science. In this study, eight topic areas chosen most were used as the themes for

teaching English grammatical competence and writing ability. This part comprises four groups of sports science subjects: types of sports, general education for sports science, science and mathematics for sports science, and special subjects for professions in sports science. In each subject group, the participants needed to rate the levels of importance of the topic areas both in their everyday lives and professions. Based on the questionnaire items eliciting data about types of sports, the participants thought that swimming was the most important sport in both everyday lives (Mean = 3.81; SD = 0.91) and professions (Mean 3.75; SD = 1.21). The data of the levels of importance of sports in their everyday lives and professions are summarized in Table 4.12.

Table 4.12: Importance of Sports in Everyday Lives and Professions

Types of Sports	Everyday Lives		Professions	
	Mean	SD	Mean	SD
Swimming	3.81	0.91	3.75	1.21
Rowing	2.46	1.07	2.48	1.09
Track Athletics	2.75	1.19	2.79	1.22
Field Athletics	2.77	1.15	2.77	1.17
Football	3.23	1.19	3.19	1.27
Rugby Football	2.21	0.85	2.48	0.99
Basketball	3.00	1.20	3.02	1.18
Volleyball	2.85	1.18	3.04	1.27
Sepak Takraw	2.42	1.11	2.69	1.29
Petanque	2.40	0.98	2.56	1.07
Martial Arts	3.02	1.18	3.10	1.17
Taekwondo	2.79	1.18	2.98	1.06
Judo	2.81	1.18	2.94	1.23
Thai Boxing	2.88	0.96	3.02	1.02
Swordplay	2.67	0.93	2.98	1.06
Fencing	2.73	0.98	2.94	1.02
Tennis	3.08	0.90	3.17	1.02
Table Tennis	3.02	0.93	3.19	1.00
Badminton	3.40	1.01	3.21	0.99
Gymnastics	2.58	1.16	2.94	1.24
Rhythmic Sportive Gymnastics	2.33	0.95	2.56	1.03
Aerobic Dance	2.94	1.31	2.96	1.24
Yoga	2.92	1.35	2.88	1.31
Social Dance	2.93	1.25	2.77	1.15

With respect to general education for sports science, the participants thought that general aspects of sports science (Mean = 3.65; SD = 0.79) was the most important subjects in general education for sports science in their everyday lives. Similar to the importance for their professions, they also rated general aspect of sports science (Mean = 3.92; SD = 0.90) and philosophy, ethics, and legal aspects of sports

(Mean = 3.92; SD = 0.82) as the most important subjects. The data of the levels of the importance of general education for sports science are summarized in Table 4.13.

Table 4.13: Importance of General Education for Sports Science in Everyday Lives and Professions

General Education for Sports Science	Everyday Lives		Professions	
	Mean	SD	Mean	SD
General Aspects of Sports Science	3.65	0.79	3.92	0.90
General Aspects of Sports Medicine	3.42	0.87	3.79	0.94
Sports Science Terminology	3.52	0.80	3.83	0.86
Philosophy, Ethics, and Legal Aspects of Sports	3.56	0.92	3.92	0.82
Sports Information and Illustration	3.48	0.82	3.69	0.80
Microcomputer Application and Information Technology in Sports	3.56	0.80	3.81	0.84
Statistics and Research Methodology for Sports Science	3.33	1.00	3.71	0.77

As for science and mathematics for sports science, the participants thought that basic physiology (Mean = 3.33; SD = 1.08) and basic anatomy (Mean = 3.33; SD = 1.15) were the most important subjects for their everyday lives. However, they rated laboratory in basic medical science (Mean = 3.56; SD = 1.01) as the most important subject in science and mathematics for sports science in their professions. The data of the levels of the importance of subjects in science and mathematics for sports science are summarized in Table 4.14.

Table 4.14: Importance of Science and Mathematics for Sports Science in Everyday Lives and Professions

Science and Mathematics for Sports Science	Everyday Lives		Professions	
	Mean	SD	Mean	SD
General Chemistry	2.65	1.19	3.06	1.12
Introductory Biology	2.77	1.17	3.19	1.02
Biochemistry for Sports Science	2.85	0.95	3.17	1.04
Mathematics	3.00	1.09	3.06	1.08
Basic Physiology	3.33	1.08	3.48	0.99
Basic Anatomy	3.33	1.15	3.46	0.99
Laboratory in Basic Medical Science	3.15	1.05	3.56	1.01

As for special subjects for professions in sports science, the participants thought that sports injuries and rehabilitation (Mean = 3.69; SD = 0.93) was the most important special subjects for their everyday lives. However, they rated sports psychology (Mean = 3.88; SD = 1.04) as the most important special subject in their

professions. The data of the levels of importance of special subjects for professions in sports science are summarized in Table 4.15.

Table 4.15: Importance of Special Subjects for Professions in Sports Science in Everyday Lives and Professions

Special Subjects for Professions in Sports Science	Everyday Lives		Professions	
	Mean	**SD**	**Mean**	**SD**
Scientific Principles of Sports Training	3.58	0.94	3.85	1.01
Sports Technology	3.40	0.98	3.71	1.01
Motor Learning	3.65	1.00	3.83	1.00
Applied Anatomy in Sports Science	3.46	1.17	3.63	1.04
Physical Fitness Training	3.50	1.09	3.73	0.98
Physiology of Exercise	3.52	0.95	3.75	1.06
First Aid and Resuscitation	3.56	0.94	3.81	1.08
Sports Injuries and Rehabilitation	3.69	0.93	3.79	1.11
Sports Pharmacology	3.33	0.91	3.40	0.98
Sports Hygiene	3.35	0.93	3.54	0.99
Sports Nutrition	3.48	1.01	3.75	1.06
Sports Psychology	3.48	0.95	3.88	1.04
Basic Recreation, Equipment, and Facilities in Sports	3.35	0.91	3.71	1.07
Sports for Special Groups, such as sports for disabilities	3.19	0.96	3.44	0.94

Part 4: Suggestions for the Development of English Writing Instruction for Undergraduate Sports Science Students

According to the questionnaire results, out of the total of forty-seven participants, there were five participants who gave suggestions for the development of English instruction. Each of them provided various suggestions. They reported that the students needed to learn and memorize terms in sports science. There should be a workshop about general communication, like speaking, listening, reading and writing. One of them reported that students should learn English only from English native speakers. Another one suggested that there should be more teaching media provided on the website:

> *"There should be some teaching materials or media which can help students understand the lessons easily."*

c) Background Information and Opinions of English Teaching Staff

Part 1: Demographic Characteristic Data

This group of participants includes seven instructors, the course administrator, and the chair of the English Program at the Faculty of Liberal Arts, Mahidol University. The data showed that eight participants were female and one participant

was male. As for the age, more than half of them (55.6%) were between 29 and 36 years old. All of them graduated with a master's degree. More than half (66.7%) were lecturers while 33.3% were assistant professors. With respect to their academic work, one-third of them (33.3%) individually had two pieces of published articles, 22.2% individually wrote two learning materials, 22.2% individually wrote one learning material, another 22.2% individually wrote three learning materials, and 11.1% individually wrote five learning materials. Most of them (77.8%) individually wrote one textbook. One-third of them (33.3%) individually wrote journals and another one-third (33.3%) individually wrote one journal. Concerning their teaching experience, two-third of them (66.7%) had teaching experience between 6 and 10 years, while 33.3% had teaching experience between 25 and 28 years. The demographic characteristics data are shown in Table 4.16.

Table 4.16: Demographic Characteristics of the English Teaching Staff

Demographic Characteristics Data	Number	Percentage
Sex		
Male	1	11.1
Female	8	88.9
Age (years)		
29 to 36 years	5	55.6
42 years	1	11.1
52 to 56 years	3	33.3
Educational Background		
Master's Degree	9	100
Academic Positions		
Assistant Professors	3	33.3
Lecturers	6	66.7
Number of Academic Work		
Academic Textbooks		
1 piece of work	7	77.8
Published Articles		
2 pieces of work	3	33.3
Learning Materials		
1 piece of work	2	22.2
2 pieces of work	2	22.2
3 pieces of work	2	22.2
5 pieces of work	1	11.1
Academic Journals		
1 piece of work	3	33.3
3 pieces of work	3	33.3
Teaching Experience (years)		
6 to 10 years	6	66.7
25 to 28 years	3	33.3

Part 2: Tendency in Developing the English Curriculum

As for the type of teaching and learning which was focused in the current curriculum, the chair of the English program reported that the lecturers of the faculty used many approaches, especially group-based approach which allows students to do language tasks in a group. In respect to the theories or teaching principles, she reported that they used the principle of homogenous learning abilities:

> *"We teach in the homogenous classrooms. Students in one classroom have similar language learning abilities. We separate groups of students by considering their O-NET results in the English subject. We use lessons with different levels of difficulty to teach students who are from different levels. In one classroom, there is one level."*

She also pointed out that there was a policy to develop the curriculum which would focus on communication in the future:

> *"We have a policy to develop the curriculum which emphasizes communication, like oral communication. It has the aim to help students be able to use the language for communication in everyday life after finishing the course. However, we still do not begin the plan for such a new curriculum."*

Another participant who shared thoughts in this part was the course coordinator of the English Level 1, a course that sports science students were required to study. With respect to theories or teaching principles used for the development of the English Level 1 course, she reported that she and other lecturers emphasized English for communication. They taught English grammar under meaningful contexts and they used the task-based approach in teaching. As for the skills emphasized in the course, course purposes, learning materials, evaluation criteria, and duration for study, she reported that they focused on integrated skills. In terms of writing skills, students were expected to write in the paragraph level. They used commercial books and one outside reading short story:

> *"We focus on integrated skills. With respect to writing skills, we emphasize writing in the paragraph level. As for other skills, we teach reading techniques, listening for everyday life, and speaking English for communication. The purpose of the English Level 1 course is to enhance the students' abilities in the uses of English grammatical features and vocabulary in the context about language use in everyday life. The course includes four main language skills, writing, speaking, listening, and reading as well English communication in the classrooms. We use commercial books, such as "Issues for Today," "First Step in Academic Writing," and "Tactics for Listening" and In-House Grammar Materials. We also have an outside reading short story "In*

the House". As for the duration for study, it is about fifteen weeks (four hours per week). In regard to evaluation criterion, we use criterion references."

Part 3: English Grammatical Features and Structure Necessary for Writing Ability

This part reports the English grammatical features and structures which were considered important factors for enhancing writing ability from the points of view of the English teaching staff. According to the questionnaire results, the participants in this group thought that run-on sentences and fragments (Mean = 4.78; SD = 0.44) were the most extremely important English structures necessary for writing, followed by nouns (Mean = 4.67; SD = 0.50), verb tenses (Mean = 4.67; SD = 0.71), and types of sentences (Mean = 4.67; SD = 0.71). The data of English grammatical features and structures which the participants regarded necessary for enhancing writing ability are summarized in Table 4.17.

Table 4.17: English Grammatical Features and Structures Necessary for Writing Ability

English Grammatical Features and Structures	Mean	SD
Articles (a, an, the) and Determiners (this, that, these, those, my, her, his, our, their, your, its)	3.67	0.71
Pronouns	3.89	0.60
Adverbs	3.67	0.71
Adjectives	4.33	0.50
Nouns	4.67	0.50
Verbs (modal verbs, auxiliary verbs, verbs)	4.44	0.73
Verb Tenses	4.67	0.71
Infinitive and Gerund	4.11	0.78
Prepositions	3.56	0.88
Coordinating Conjunctions	4.56	0.53
Relative Clauses and Relative Pronouns (who, which, that, etc)	4.33	0.50
Comparatives and Superlatives)	3.89	0.60
Active and Passive Voices	4.33	0.50
Reported Speech	3.56	0.88
Subject-Verb Agreements	4.33	1.12
Word Order	4.56	0.53
Phrases (noun phrases, verb phrases, prepositional phrases, etc.)	4.00	0.87
Types of Sentences (simple, compound, and complex sentences) and Clauses (dependent clauses and independent clauses)	4.67	0.71
IF-Clauses	3.78	0.67
Run-on Sentences and Fragments	4.78	0.44

Part 4: Writing Errors in English Grammatical Features and Structure Found in the Students' Pieces of Writing

This part reports the writing errors in English grammatical features and structures that the English teaching staff found in the students' pieces of writing. The participants reported that they found wrong or missing articles and other determiners (Mean = 4.44; SD = 1.13) and wrong or missing verb tenses (Mean = 4.44; SD = 0.88) more than other types of errors in the work of students from other faculties. Similarly, in the group of sports science students, they also reported that they found a great deal of wrong or missing articles and other determiners (Mean = 4.78; SD = 0.67) more than other types of errors. The data of the levels of the frequency of errors they found in the pieces of writing of students from other faculties and those found in the pieces of writing of sports science students are summarized in Table 4.18.

Table 4.18: Errors in English Grammatical Features and Structures Found in the Students' Pieces of Writing

Errors in English grammatical features and structure found in the students' pieces of writing	Students from Other Faculties		Sports Science Students	
	Mean	**SD**	**Mean**	**SD**
Missing Punctuation Marks	3.33	1.12	3.78	1.09
Comma Splice	3.22	1.39	3.67	1.41
Vague Pronoun Reference	3.56	1.24	3.78	1.09
Wrong or Missing Verb Ending	4.11	1.36	4.33	1.32
Wrong or Missing Noun Ending	3.67	1.22	4.00	1.22
Wrong or Missing Prepositions	3.67	1.32	4.11	1.05
Wrong or Missing Articles (a, an, the) and Other Determiners	4.44	1.13	4.78	0.67
Wrong or Missing Verb Tenses	4.44	0.88	4.67	0.71
Irrelevance of Subject-Verb Agreements	4.11	1.05	4.56	0.53
Sentence Fragments	4.00	1.32	4.56	0.53
Misplaced or Dangling Modifiers	3.33	0.87	3.67	1.12
Wrong Word Order in the Sentence	3.56	1.24	4.11	0.93
Wrong Sentence Order in the Paragraph	3.67	1.00	4.22	0.97
Writing Sentences that Are Not Understandable	3.89	1.05	4.67	0.71

Part 5: Opinions toward the Effects of Form-Focused Instruction and Web-Based Instruction on the Enhancement of English Grammatical Competence and Writing Ability

This part reports the opinions of the English teaching staff toward the advantages of grammar instruction to English writing ability, advantages of using content matters in sports science as the context for study, and advantages of web-based instruction. It aimed to find out whether form-focused web-based instruction was

worth developing for the students. According the questionnaire items asking about the advantages of grammar instruction to English writing, the participants strongly agreed that grammar instruction helped students understand meanings of communication in general (Mean = 4.67; SD = 0.71), use language in a standard way (Mean = 4.67; SD = 0.71), communicate and interpret contents of the study accurately and appropriately (Mean = 4.67; SD = 0.71), and reduce writing errors (Mean = 4.67; SD = 0.50) more than other advantages. The findings of the teaching staff's opinions toward the advantages of grammar instruction to English writing are summarized in Table 4.19.

Table 4.19: Opinions of the English Teaching Staff toward the Advantages of Grammar Instruction to English Writing

Advantages of Grammar Instruction to English Writing	Mean	SD
Understand meanings of communication in general. Grammar helps synthesize contents and has an effect on other language skills which are concerned with learners' communication.	4.67	0.71
Learn language better and faster	4.44	0.88
Use language in a standard way	4.67	0.71
Communicate and interpret contents of study accurately and appropriately	4.67	0.71
Reduce writing errors	4.67	0.50
Develop writing abilities in general. Learners can check and correct their own writing errors.	4.33	1.00
Have confidence in writing. Learners can add, omit, replace, or combine words, phrases, clauses, and sentences in a paragraph correctly and appropriately	4.44	0.53
Enhance analytical abilities so that learners can find meanings, roles of sentences, and purposes of pieces of writing efficiently	4.11	0.93
Choose appropriate words to create sentences and paragraphs correctly, appropriately and easily	4.56	0.73

When asked about the advantages of using content matters in sports science as the context for study, the participants strongly agreed that context encouraged students to use knowledge they learned to apply for use in their writing (Mean = 4.89; SD = 0.33) more than other advantages. The findings of the opinions of the English teaching staff toward the advantages of using content matters in sports science as the context for study are summarized in Table 4.20.

Table 4.20: Opinions of the English Teaching Staff toward the Advantages of Using Content Matters in Sports Science as the Context for Study

Advantages of Using Content Matters in Sports Science as the Context for Study	Mean	SD
Learn both content matters and the English language at the same time	4.56	0.73
Learn and develop writing skills from the contents they need in use in their everyday lives	4.33	1.00
Enhance enthusiasm to learn language and make their English learning not boring	4.11	1.05
Enhance analytical skills in academic and social contexts	4.33	0.71

Table 4.20: Opinions of the English Teaching Staff toward the Advantages of Using Content Matters in Sports Science as the Context for Study (Continued)

Advantages of Using Content Matters in Sports Science as the Context for Study	Mean	SD
Encourage learners to use knowledge they have learned to apply for use in their writing	4.89	0.33
Know writing direction	4.56	0.78
See how to use some grammatical items and how they are changed upon context	4.11	1.05
Learn grammar accompanying with vocabulary, paragraph organization, communicative skills, and writing techniques at the same time	4.44	0.88
Write sentences and a paragraph correctly based on the context and purposes of writing	4.56	0.73

With respect to the advantages of web-based instruction, the participants strongly agreed that such the instruction developed a learning network (Mean = 4.67; SD = 0.71) and reduced gaps of time and distance (Mean = 4.67; SD = 0.50) more than other advantages. The findings of the opinions of the English teaching staff toward the advantages of web-based instruction are summarized in Table 4.21.

Table 4.21: Opinions of the English Teaching Staff toward the Advantages of Web-Based Instruction

Advantages of Web-Based Instruction	Mean	SD
Develop a learning network	4.67	0.71
Emphasize learner centeredness	4.22	1.09
Reduce gaps of time and distance	4.67	0.50
Save expenses for learning and travelling. Learners can learn online lessons at home.	4.56	0.73
Promote acquisition and make learning language not boring	3.89	1.36
Learn English writing from several types of media, such as videos, slides, and other multimedia	4.11	1.27
Do exercises and check answers immediately	4.33	1.00
Exchange thoughts, discuss about problems in writing through social networking, like Facebook, weblog, and other media	4.22	1.30
Learn English wring from authentic resources	4.22	1.39

Part 6: Suggestions and Expectations Regarding the Web-Based Course

Based on the questionnaire results, there were six participants who provided some useful suggestions for the development of the web-based course. Each of them gave various suggestions. They reported that students should have more opportunities to learn from games or movies because it was easy to enhance their interests in language learning. There should be various exercises about English grammar and structures for students before they started writing. Moreover, students should be given feedback from the answers they made on the website. The feedback should show their

mistakes and errors as well as how to correct or omit them. One of them reported that content areas in sports science should be used as the context for studying English grammar because they were derived from what students were familiar with.

Apart from this, two participants reported that it was necessary to conduct a needs analysis because the lessons and activities on the website should be developed from the students' interests:

> *"Students' interests are different and changed all the time. Therefore, it is necessary to explore their needs continuously so that we can develop lessons and activities based on their right needs. Perhaps, there could be a context about learning materials which are designed by the students. This may be able to check their interests and such a new learning material may be adapted to use in the real classroom."*

4.1.2 Interview Protocol

The interviews were conducted to gain in-depth information beyond the data gathered from the questionnaire. In this study, the semi-structured interviews were employed in order to obtain the information as it was expected as well as some other related information necessary for the course development. The interviewees were divided into three groups: thirteen sports science students, six people who worked in the fields of sports science, and nine English teaching staff. The purpose of the interview was to gather information about topics of writing, levels of writing, problems in English writing, importance of grammatical competence to writing ability, necessity of English grammatical features, advantages of form-focused web-based instruction, necessary content matters in sports science, duration of the web-based course, importance of writing skills in sports science professions, methods for writing instruction, policy on course development, teaching principles and strategies, and suggestions for the web-based course development. The data gathered from this process were used to develop the pre-test and post-test and the web-based course, and to select Web 2.0 technologies which were used accompanying the web-based course.

a) Opinions of Sports Science Students

The interview results in this part are concerned with topics of writing, levels of writing, and problems in English writing that sports science students experienced in their English learning. The findings also revealed their attitudes toward the importance of grammatical competence to writing ability, necessary English grammatical features, advantages of form-focused instruction, advantages of web-based instruction,

necessary subject matters in sports science, duration of the web-based course, and suggestions for the development of the web-based course.

1. Topics of Writing

The topics of writing in which the interviewees reported that they were usually assigned to do were considered to be the topics for writing in the pre-test and post-test and on the weblog. Based on the interview results, all of them reported that they were usually assigned to write their own biographies or anything related to their personal lives:

> *"We usually write biographies or some other things related to our lives, such as addresses, hometowns, or family members."*

2. Levels of Writing

The data gained in this part were used to find out the appropriate level of writing the students should be assigned to do. According to the results of the interview, all of the interviewees reported that they started writing in the sentence level. After that, they were allowed to write a paragraph or short essay:

> *"First of all, the teacher assigns us to write English sentences in various types. She teaches some grammatical features necessary for writing. We are allowed to arrange sentences to create a paragraph. Then we can write a short essay."*

3. Problems in English Writing

This part reports the problems in English writing, such as using incorrect grammatical features, insufficient English background knowledge, vocabulary knowledge, using capitalization, and spellings which the students usually had in English writing. The data gathered in this part were used to develop the lessons on the web-based course. Based on the interview responses, it was found that the students had various problems in their English learning. Seven interviewees reported that they had problems with using incorrect English grammatical features. They pointed out that this problem could result in miscommunication:

> *"I usually have problems with using English grammatical features. Sometimes I use incorrect grammatical features and the meanings of the sentence change in the opposite way. I cannot communicate my thoughts in the right way."*

Other interviewees cited that had problems with vocabulary. They could not memorize a large number of English vocabulary lists. They also had problems with sentence structures, spelling, and capitalization. Most importantly, one of them

reported that he had all language problems. He thought that he lacked English background knowledge.

4. Importance of Grammatical Competence to Writing Ability

The aim of this part was to find out whether English grammar instruction was worth promoting. If it was, it meant that English grammatical features and structures should be taught in writing classes. From the interview responses, twelve interviewees reported that grammatical competence had a great effect on writing abilities. They cited that with grammatical competence, they were able to write correctly and meaningfully. If they had good English grammatical competence, they believed that they were able to correct their own writing assignments:

> *"Grammatical competence is very important. If we do not have good comprehension in English grammar, we may not be able to write meaningful sentences. We may not be able to express our thoughts as what we want. If we cannot write in the meaningful l way, readers may misinterpret our thoughts. Therefore, grammatical competence helps use write accurately and meaningfully."*

On the other hand, one interviewee reported that grammatical competence was necessary but it was not too much for everyday lives. He pointed out that native speakers could speak without paying attention to grammar:

> *"In my opinion, it is necessary but not too much. Foreigners can use the English language without attention to grammar."*

5. Types of English Grammatical Features and Structures Necessary for Writing Instruction

This part reports the types of English grammatical features and structures believed to be necessary for writing instruction by sports science students. The grammatical features and structures which were considered necessary for English writing ability would be considered to be included in the web-based course. From the interview responses, the volunteering interviewees provided various points of view toward types of English grammatical features and structures which should be emphasized in writing instruction. Seven interviewees reported that verb tenses, like present, future, and past tenses were important for English writing:

> *"I think all of English grammatical features are important, but the most important thing is verb tenses, in my opinion. Tenses can tell whether the situation happens in the present, past or future. If we use verb tenses incorrectly, readers will not know when the situation takes place."*

As for the other interviewees, four interviewees reported that word order was important because if the words were arranged in the wrong place, the meaning could change. Two of them said that parts of speech were important because if they had good comprehension in this, they would be able to use the right word in the right place of the sentence. One interviewee reported that subject-verb agreement was important because it could show the writer's language proficiency. In addition, one of them reported that all of English grammatical features were important. If they lacked any of them, they were not able to produce a good piece of writing.

6. Advantages of Form-Focused Instruction

This part reports the attitudes of interviewees toward the advantages of form-focused instruction. It aimed to find out whether form-focused instruction was worth using in the web-based course. According to the interview results, it was found that all of the interviewees had positive attitudes toward this type of instruction for various reasons. Three interviewees reported that this teaching method could help them improve their writing as it made them know what types of sentences were required. Two interviewees reported that they were able to learn how the subject had a relationship with the predicate with this teaching method. Also, giving grammar explanation using a meaningful context was like giving them a good example. They were able to learn how to write meaningful sentences. Moreover, giving grammar explanation through a meaningful context could help them practice writing and reading skills at the same time. Such the instruction provided techniques necessary for doing the exams. They were also able to learn new lists of vocabulary and how to use English grammar in depth from a meaningful context. They were not only able to get more details regarding English grammar but also control the content of his writing in the way he wanted.

Especially when content matters were used as the context for study, ten interviewees reported that teaching writing using context derived from their subject matters could help them improve writing skills because they were what they were familiar with. They pointed out that with this teaching method, they would have sufficient information for writing:

> *"I am pretty sure that using my content matters as the context for study will help me write better. They are what we specialize in. They have sufficient information for*

writing. If we have information about what we are going to write, we will be able to write better."

7. Subject Matters in Sports Science

The subject matters which were considered necessary for sports science students would be developed as the topics of the web-based course. It was found that most of the students preferred the contents about first aids or anything related to the human body:

"I think it should be the topics which are concerned with human body, like anatomy, first aids, injuries during the games, something like that. These are the topics that are concerned with our study most, in my opinion. We need to know how to give first aids to other people or ourselves because we usually attend many sports competitions, so we can have injuries easily."

Four interviewees suggested the contents about general aspects of sports science:

"I think it should be contents about general aspects of sports science because it is the basic subject that we need to learn. We can need a lot of terms in this subject and I think that we can apply them for use in writing."

Another one reported that the selected contents should come from the decision of the teacher:

"I think the contents should not be so academic. The contents derived from our subject matters may be too difficult. Therefore, I think it is better if the teacher is the only person who selects the topics."

Meanwhile, other interviewees suggested the contents about sports nutrition, physical exercise, sports psychology, and types of various sports. However, they said that topics for writing should not be so complicated.

8. Advantages of Web-Based Instruction

This part reports the attitudes of interviewees toward the advantages of web-based instruction to see if it was worth developing web-based instruction. According to the interview results, it was found that all of the interviewees had positive attitudes toward web-based instruction. They also gave various attitudes toward this type of instruction. Five interviewees reported that it was convenient and not boring like learning from textbooks:

"I think learning on the web is quite convenient because I do not have to go to the university, but I can study at home. It's not too boring like the textbooks. Also, there

is no need to open a book because I can visit the website and click on the item of my

interest. It is easier to learn in such a way."

Other interviewees reported that it was good to study from web-based technologies. For example, they pointed out that if they had a chance to practice writing on weblogs, they would not feel embarrassed if they made a lot of language mistakes. Web-based instruction also gave them more choices for studying the English language. On cyberspace, they were able to get many new pieces of information. They could search anything they wanted.

However, even though it seemed that web-based instruction had many advantages, some interviewees reported that it could result in both positive and negative effects:

"Learning from the website has both positive and negative effects. As for its positive

effects, it allows us to study anytime and anywhere if only we have a mobile phone

with EDGE/GPRS or wireless connection available. In terms of its negative effects, if

we do not understand some lessons, we cannot ask or see the teacher face to face at

that time. We can only review the lessons on the website again and again. Moreover,

it makes us lazy because if we know that we can study anytime and anywhere, we will

postpone the date of studying more often than learning in a traditional classroom."

In addition, one interviewee reported that web-based instruction was good, but students themselves need to know that they should visit the website regularly.

9. Duration of the Course

To find out how long a course should be open, the interviewees were asked about the period of time suitable for them to study from the web-based course. Most of them reported that it was better if they could study from the web-based course for one semester:

"The website should be open from the beginning of the semester until the period of

the final exam. Some students who have free time at this moment, they can visit and

study lessons from the web-based course. However, for some others who rarely have

free time now, they may visit the website before they take the exam. Therefore, the

website should be open around one semester or more than that so that other people

besides students can study from the website."

Other interviewees reported that the web-based course should be open for one or two months. Some of them reported that the course should be open for one or two weeks before the final exam.

10. Suggestions for the Development of Lessons and Activities on the Web-Based Course

This part shows the interviewees' suggestions for the development of lessons and activities on the web-based course. Nine interviewees suggested that there should be games on the website. They pointed out that games made them enjoy language learning, and this could help them memorize what they have learned more easily:

> *"Many people feel fun and happy while they are playing games. If we have a chance to learn the English language from playing games, we will feel fun and happy with learning. If we learn with fun, we will be able to memorize what we learn easily."*

Other interviewees suggested that the lessons on the website should be taught via popular songs, videos or animations so that they would feel relaxed when they studied.

b)   Opinions of People Who Worked in the Fields of Sports Science

The interview results in this part report the attitudes of people who worked in the fields of sports science toward the importance of writing skills in their professions and subject matters necessary for their professions. The findings also reveal the types of writing and writing problems they found in their professions. They gave suggestions for the development of the web-based course as well.

1. Importance of Writing Skills in Sports Science Professions

The attitudes of the interviewees about the importance of writing skills in their professions were investigated. It aimed to find out whether it was worth placing a focus on English writing skills. Based on the interview responses, all of the interviewees thought that English writing skills were important for them. Two interviewees reported that English writing was important, but it was not as important as speaking and listening skills:

> *"I think speaking and listening are the most important skills. Writing is also important, but it is not much as speaking and listening. If we are not good at listening, we may interpret what foreigners say in the wrong way."*

Another two reported that writing skills were important because in the future, students had to write exercise programs or sports programs in their line of work:

> *"In the future, students have to write sports programs. Students need to practice writing. They need to learn terms in sports science necessary for writing. The terms used in our fields have different meanings from usual words. Students need to learn them."*

Other interviewees reported that writing skills were important because the English curriculum emphasized English writing skills. They also pointed out that writing skills were important for their jobs.

2. Types of Writing in the Fields of Sports Science

Types of writing the interviewees found in their professions would be considered to be used as the topics for writing on the weblog and the pre-test and post-test. According to the interview responses, the interviewees reported that they found various types of writing. Two interviewees reported that they needed to write about sports program and sometimes they made boards showing how to play sports in English.

Another two reported that they wrote about how to use fitness equipment:

"I sometimes need to write a manual describing how to use some sport equipment, such as helmets, mouth guards, goggles, soft pads, and skin guards."

Other interviewees reported that they needed to write about proper postures for exercising. Some of them said that they sometimes needed to translate Thai into English.

3. Writing Problems Found in Sports Science Professions

This part reports writing problems the interviewees found in their professions. The data collected were used as the background for developing the lessons on the web-based course. It was found that four interviewees had problems with their grammatical knowledge:

"I have problems with English grammar. I usually use incorrect grammatical features in the sentence. I cannot arrange words in the right order. I usually say words by words. I need to consult with other people when I have something to write in English. I have problems with writing more than speaking because we can use slang words when we speak, but when we write we need to know grammar well so that we can write correctly."

Other interviewees reported that they lacked sufficient vocabulary knowledge and sometimes could not arrange words to form a sentence.

4. Subject Matters in Sports Science

The information about subject matters in sports science in which the interviewees considered necessary for their professions would be considered to be developed as the topics for study on the web-based course. Based on the interview

responses, the interviewees provided various opinions toward some subject matters in sports science. As for topics about types of sports, two interviewees reported that all kinds of sports were important. It depended on what points they used for writing:

> *"I think all kinds of sports are equally important. It depends on what points of them we use for writing. For example, if we write about sports entertainment during a break, we can write anything about the sport we play in the funny way. We can pick up various topics for writing like playing football, basketball, volleyball and swimming for entertainment."*

Another two reported that topics in sports should be derived from the students' own interests:

> *"The topics should be derived from the students' own interests. Because students have comprehension in the sports they like, it will be easy for them to write."*

Other interviewees suggested that football could make a good topic for writing because in Thailand, there were many professional footballers. Some of them reported that swimming could make a good topic for writing because it was good for health.

In terms of general education for sports science, six interviewees suggested the topics which were concerned with body and health, such as first aid, physical exercises, and body movements:

> *"I think every day it is easy for sportsmen to have injuries during the competitions. If students need to work with foreign sportsmen, they need to have sufficient English language knowledge to explain about how to give first aids. Physical exercises and body movements are also important because they need to explain how to move and exercise properly to foreigners who come to the sport center."*

They also suggested the topics about sports equipment, sports marketing and management, ethic and legal aspects in sports, and general aspects of sports science.

With respect to science and mathematics for sports science, all of them suggested that they should write from the topics of anatomy and basic physiology:

> *"Anatomy and basic physiology are important because they are knowledge background in sports science that students need to know. If they do not know about human body, it may be difficult for them to train sportsmen."*

Meanwhile, in terms of special subjects for professions in sports science, all of them suggested that they should write from the topics of human body, such as body movement, physical exercises, and body testing:

> *"Body movement is a very important topic because we need to know this in order to design a sports program for sportsmen. We need to write about each movement a*

sportsman needs to do for playing sports, such as making a step forwards and backwards. We need to learn how to exercise properly in order to avoid injuries and harms to their body. We also have to interpret the results of body testing in English."

5. Suggestions for the Development of Lessons and Activities on the Web-Based Course

The suggestions given were considered for the development of lessons and activities on the web-based course. Three interviewees suggested that the teacher should emphasize English grammar rules and usage as well as sentence structures:

"The teacher should focus on teaching English grammar rules and usage and sentence structure. The students should be taught about how to use grammatical features to create correct sentences. As a result of this, they will be able to write a meaningful story."

Other interviewees suggested that to develop writing skills, students should have a chance to write about topics related to sports. Moreover, students should learn more about terms or lists of vocabulary necessary for writing.

c) Opinions of English Teaching Staff

The interview results in this part report topics and levels of writing students were assigned to do, teaching methods used for writing instruction, types of grammatical features necessary for writing, problems found in the students' pieces of writing, policies for the course development, teaching principles, and strategies used in the course. The findings revealed the attitudes of the English teaching staff toward the importance of grammatical competence to writing ability, advantages of form-focused web-based instruction, duration of the course, and suggestions for developing lessons and activities on the web-based course. They also provided some additional suggestions for course development.

1. Topics of Writing

The topics of writing in which the interviewees reported that students were usually assigned to do would be considered to be the topics for writing in the pre-test and post-test and on the weblog. Based on the interview responses, all of them reported that they usually assigned students to write about their biographies, favorite things or people, well-known places, family members, and whatever happened in their everyday lives:

"I usually assign them to write about events they find in their everyday life, biographies, favorite things or people, well-known places, and family members. I think these topics can easily attract their interest because they are concerned with them. They have many ideas about these topics that can be applied for writing."

Two of them assigned students to write about a step in doing something because they want the students to learn how to use transition signals. Other interviewees assigned students to write a comparative paragraph comparing things. Some of them also provided pictures for students to describe places, people, and things.

2. Levels of Writing

The information gathered in this part was used to find out the appropriate level of writing the students should be assigned to do. Based on the interview responses, eight interviewees said that they started teaching students about how to write sentences and then assigned them to arrange the sentences into a well-organized paragraph:

"First, students are assigned to write sentences in various types: simple sentences, compound sentences, and complex sentences. After learning how to write English sentences, they are given a chance to write a paragraph."

However, one of them reported that she usually assigned students to write essays:

"For me, I like to assign them to write short essays because it is easy to show their errors. They can learn what are right or long from the essays. As a result of this, they will get improvement in their writing abilities."

3. Methods Used in Writing Instruction

The findings about the methods the teaching staff used in writing instruction were collected and used as the background to develop the lessons on the web-based course. From the interview responses, seven interviewees reported that they provided examples of good writing and explained the paragraph organization from the examples:

"In the textbook, there are examples of good writing teaching how to write a well-organized paragraph. I suggest students to write their own paragraphs using the examples. The students can notice paragraph elements, what each paragraph begins with and what are topic sentences, main ideas, minor details, and concluding sentences."

Six of them taught English grammatical features and sentence structures:

"I usually begin the lessons with grammar explanation and sentence structure. I want them to learn what is right or wrong and what points they need to be careful in using some English grammatical features. I also provide examples of good writing for the students."

Two participants assigned students to do exercises in the commercial textbook of the course. Many exercises require students to rearrange sentences to form a meaningful paragraph:

"I usually assign students to do exercises, like the exercises in the textbook "First Step in Academic Writing" in which the students need to rearrange sentences to create a meaningful paragraph."

They reported that they also taught English writing together with having students consider major and minor mistakes, assigning them to work in groups, brainstorming ideas, and teaching other linguistic elements, such as punctuation marks, word forms, word choices, and word meanings.

4. Problems Found in the Students' Pieces of Writing

This part reports the problems in English writing, such as using incorrect grammatical features and structure, creating meaningless sentences, insufficient vocabulary knowledge, negative language transfers, paragraph organization, and spelling that the students usually had in their pieces of writing. The data gathered in this part were used to develop the lessons on the web-based course. From the interview responses, seven interviewees reported that students usually had problems with using some English grammatical features (subject-verb agreement, verb tenses, word order, parts of speech, and articles) and sentence structures. They said that students could not use correct grammatical words to create sentences. They found that students usually made wrong sentence structure. They chose words from the wrong parts of speech to create sentences. They could not arrange words into the right order:

"I found that many students could not arrange words in the right order. From their pieces of writing, I saw students had problems with English grammar, such as subject and verb agreement, articles, verb tenses, and parts of speech. Students usually omitted articles (a, an, the). They did not know what types of verbs they needed to use in the sentence. Sometimes they used incorrect tenses."

Four interviewees found that students usually made meaningless sentences because they chose wrong words:

> *"I found that many students could not make meaningful sentences. It is like they could*
> *not think of or use suitable words to communicate their thoughts. Therefore, they tried*
> *to solve this problem by using some other words to substitute for the right words*
> *without considering the right meanings of words and the grammar. They usually put*
> *nouns, verbs, or some other grammatical words in the wrong order."*

Three of them reported that many students lacked sufficient vocabulary knowledge. They were not able to choose appropriate words to create sentences:

> *"I found that many students did not know how to use the right words to create*
> *sentences appropriately. They had spelling problems. They could not use the right*
> *words. Also, they lacked sufficient grammatical knowledge. With these reasons, they*
> *usually made meaningless sentences. Because they had problems in writing English*
> *sentences, they could not make a meaningful paragraph."*

Another two reported that many students had writing problems which resulted from negative transfer. They could not identify the differences between Thai and English. They thought in Thai and used Thai sentence structures to create English sentences:

> *"I found that many students could not separate the differences between Thai and*
> *English. Since they could not separate the differences of these two languages, they*
> *usually made wrong English sentence structure. They used Thai sentence structure*
> *with all types of English sentences. They had problems with using words, creating*
> *sentences, and arranging sentences to form a paragraph."*

They also reported that many students had problems with paragraph organization (topic sentences, main ideas, supporting details, and concluding sentences) and spelling.

5. The Importance of Grammatical Competence in Developing Writing Ability

The aim of this part was to find out whether English grammar instruction was worth promoting. If it was, it meant that English grammatical features and structures should be taught in writing classes. Based on the interview responses, six interviewees reported that grammatical competence had a lot of effects on the students' writing ability. They said that students who had better knowledge of grammar would have more confidence in their writing. They said that as a result of this, their writing work was better than those who lacked grammatical competence:

> *"Grammatical competence pays a lot of effects on the quality of writing. This is*
> *because quality has a connection with accuracy. Pieces of writing that have high*
> *quality should have grammatical accuracy. In my opinions, students in this level have*

many interesting ideas in their mind, but they have limited language competence. Therefore, if they have good grammatical competence, they will have confidence in their writing. In other words, they will be able to write better if they have grammatical competence."

In addition, one of them reported that grammatical competence had the effects on writing ability because if students lacked this competence, they could not identify their major and minor mistakes in their pieces of writing:

"I'm pretty sure that grammatical competence has the effects on writing ability. This is because if students lack background knowledge in English grammar, they may not be able to identify their major and minor mistakes they made in their pieces of writing. Moreover, their thoughts they want to show in their writing may be interpreted in the wrong way if they lack grammatical competence."

Other interviewees reported that grammatical competence partly had some effects on writing ability. They pointed out that even though students had good grammatical competence, miscommunication could result if they lacked comprehension in paragraph organization.

6. Types of English Grammatical Features and Structure Necessary for Writing Ability

This part reports the types of English grammatical features and structures believed to be necessary for writing instruction by English teaching staff. The grammatical features which were considered necessary for English writing ability would be considered to be included in the web-based course. According to the findings, the interviewees gave various reasons for the necessity of some English grammatical features. Three interviewees pointed out that word order was the most important thing to learn because if words were arranged in the wrong way, meaning may be conveyed in a wrong way:

"I think word order is the most important thing for students because we know who did what and why, where, when and how someone did something from word order. Word order helps readers get the meaning of the sentence."

Another three reported that types of sentences were the most important thing because if students did not have good comprehension in sentence formation, it was not easy for them to create a meaningful paragraph:

"Students need to learn more about types of sentences, like simple, compound, and complex sentences. If they have this comprehension, their paragraph will look more lively and meaningful than a paragraph which has only simple sentences."

Two interviewees said that parts of speech, such as nouns, verbs, adjectives, and adverbs are important for students because parts of speech were related to word order. They reported that if students understood parts of speech, they could arrange words in a grammatically correct order. Some of them also reported that English verb tenses were the most important things for students. They said that this was because verb tenses did not exist in the Thai language:

"I think verb tenses are the most important things for students. This is because if students use a wrong tense, we cannot know when the situation they write in their piece of writing actually happens. It can easily make me confused about the time they want to show. Apart from this, verb tenses do not exist in the Thai language. If students lack comprehension in verb tenses, they may not convey their thoughts as they want. As a result of this, the quality of their writing may decrease dramatically."

Other interviewees reported that the active and passive voices and subject-verb agreements were important for English writing. They pointed out that the active and passive voices were important because they had an effect on the meaning of the sentence. As for subject-verb agreement, they reported that it was important because it could easily show the relationship between the subject and predicate of the sentence. They said that students knew the subject of the sentence by considering verb forms.

7. Advantages of Form-Focused Instruction

This part reports the attitudes of interviewees toward the advantages of form-focused instruction. According to the interview results, four interviewees reported that context helped students understand the messages in the communication. The context provided should be derived from what they found in their everyday life or what they learned in their subject matters. They said that teaching grammar within a meaningful context could better attract students' attention because if it was concerned with what they had learned, they were able to apply it to use more easily:

"It helps a lot if the context chosen is derived from the topics they have to learn or concerned with their everyday life, they can apply the ideas they learn to use in their occupation. This method can easily attract their interest in learning and student will feel that it is not worthless to study. It is not just a matter of studying for the exams, but they can apply what they learn to use in their lives."

Three interviewees reported that teaching grammar within context helped students memorize grammatical rules:

> *"It is better to teach grammar within meaningful context because it can help students memorize that in some particular situations like what are shown in context, they need to use some specific types of grammar."*

Another one reported that context helped students understand how to use some English grammatical features more clearly:

> *"Students know that with this type of context, they need to use some specific grammatical features. Therefore, when they see the same grammatical features in other contexts, they will be able to get the meaning right away."*

Especially when the contents chosen were derived from the student's subject matters, five interviewees reported that using their own content matters as the context for writing instruction could help students write better. This was because the contents were derived what students were familiar with. In other words, students would be able to apply the content matters they learned in their writing:

> *"I think this technique can help students enhance their writing ability. Because of the topics for writing derived from their content matters, there will be many features that students are familiar with, such as terms, contents, sentence structure, and paragraph organization. They will be able to apply what they have learned from their content matters to use in writing. It will be easy for them to write."*

Three of them reported that this technique could partly help students write better. However, the topics chosen should not be so academic or complicated. They said that it was necessary to consider the students' background knowledge and language proficiency:

> *"It is good to assign students to write in the contents they are familiar with. However, I do not assign students to write something too academically, like physics, chemistry, and many complicated topics because they are difficult for students in this level to deal with. I choose something related to their everyday lives, such as their favorite sports, their sporting experience, or some other interesting topics instead."*

Apart from this, they reported that teaching students using the contents they were familiar with could enhance their interest. If students had more interest, they were more likely to develop their writing. They pointed out that this teaching technique could help students enhance their writing ability because they were able to apply the terms from the subject matters to use in their writing.

8. Advantages of Web-Based Instruction

This part reports the attitudes of interviewees toward the advantages of web-based instruction. According to the interview results, all of the interviewees had positive attitudes toward web-based instruction. Five interviewees reported that it was interesting for students to learn from websites. Unlike textbooks, they pointed out that websites had both audio and visual graphics. However, they said that the lessons or contents taught on the websites needed to be corresponded with what were taught in the traditional classroom:

> *"I think it is good to develop the website for language learning because it can easily attract students. There are both audio and visual graphics in which students cannot see in their textbooks. Moreover, it seems that many teenage students like to study from computer more than textbooks because it is not boring. However, the website should be designed in correspondence with the main course. It also needs to match with the students' needs. If the website has the same lessons as what students learn in their traditional classroom, such a website can help students learn the language. In other words, if the lessons on the website are not concerned with the lessons in their main course, students may not access the website."*

Other interviewees reported that the website gave students more chances to review the lessons. They also pointed out that web-based instruction could support the lessons students learned in their traditional classroom. In addition, the lessons taught on the websites should be derived from the students' weaknesses in using English grammatical features and writing difficulties.

However, even though from the viewpoints of the interviewees, web-based instruction seemed to have a lot of advantages, some of them reported that it also had disadvantages. Two interviewees reported that learning from websites had both positive and negative effects. They pointed out that students could study anytime and as long they wanted. They could save money for travelling. They could review the lessons again and again. They did not have to wait for their classrooms, but they could study in the levels they wanted. However, they could not ask the teacher directly. To solve this problem, students should be allowed to contact with the teachers via Facebook.

9. Policy on the Development of the English Level 1 Course

This part is devoted to the policy on the development of the English level 1 course. The data gathered from this part were used as the background for developing the web-based course. From the interview responses, the chair of the program said that the present policy focused on writing skills. However, they were developing the policy. It would be carried out in the coming year and focus on productive skills, like speaking and writing.

10. Teaching Principles and Strategies Used in the English Level 1 Course

This part shows the teaching principles and strategies used in the English level 1 course. Based on the interview responses, the course coordinator claimed they made a decision about the lessons, activities and course evaluation after the meeting. The textbooks needed to be related to the goal and course objectives:

> *"We make a decision about the lessons, activities and course evaluation after the meeting. We vote in the meeting. First, we need to consider the goal and objectives of the course. Then, we choose textbooks that have the lessons corresponding with the goal and course objectives. We usually have a meeting discussing about positive and negative sides of the textbooks we have used with students from previous semesters. The teachers show their opinions toward the textbooks whether they should be used in the new coming semester. The textbooks that are considered worth using will be used in the new coming semester. As for those that are regarded useless, we will use some other new textbooks instead. We evaluate students from the exam results. We devote 30% for midterm examination, 40% for final examination, 10% for listening test, 10% for writing test, and 10% for classroom participation and attendance. However, the evaluation can be changed after the meeting."*

11. Duration of the Course

The data collected in this part was used to find out how long a course should be open. The interviewees were asked about the period of time suitable for them to study from the web-based course. Most of the interviewees suggested that the web-based course should be open for one semester:

> *"The web-based course should be open for one semester. We also have developed a website for Level and it allows students to study in one semester. The teacher should tell students to access and do some activities on the website since the new semester starts until the end of the semester. They should be assigned to access the web continuously. Writing skills need time for development, so I think it should take approximately one semester."*

Other interviewees suggested the web-based course should be open about two to three weeks before the exams.

12. Suggestions for the Development of Lessons and Activities on the Web-Based Course

The data collected in this part were considered for the development of lessons and activities on the web-based course. Three interviewees suggested that there should be games, video presentations, and songs on the website:

> *"There should be games, videos, songs, animations or short clips from the movies. We can these entertaining media to relate with what we are teaching. This will make the lessons more interesting. However, we have to know the needs of students. The lessons need to be related to the main course so that they will study from the website."*

Moreover, for the other interviewees, three of them reported that students should be allowed to contact the teacher via Facebook. Meanwhile, another three reported that weblog should be promoted as an online free space for students to practice English writing.

Besides all of the aforementioned information, three interviewees in this group also provided additional suggestions for the web-based course development. One of them suggested that English grammatical features and structures should be taught in meaningful contexts. The teacher should also explain the differences between Thai and English languages. Students should be allowed to write as much as they could first before their grammar usage and sentence structures were checked:

> *"If we teach students only the principles of English grammar, students may not be able to communicate their thoughts in the meaningful way. We should teach them how to use some grammatical features and structure in context. We should provide some sentences that show particular grammatical features and then we can explain how to use them. We need to explain the differences between Thai and English. We make a sentence in Thai in this way while the English we use another way. First of all, students should be allowed to write as much as they want. After that, they can check grammar and sentence structure."*

One of them also suggested that it was important to know the students' problems in learning:

> *"I think in order to develop a tool for teaching sports science students, we need to know and understand their problems. We may think that they have the same problems as students from other faculties. However, many students in this group have low*

English proficiency because they do not have much time for study. They need to practice sports or attend sports competitions regularly. They have problems with sentence structure. The sentences they make are usually meaningless. Some students can speak English, but they still have problems with writing. They do not know how to arrange words in the right order. They do not know which tense is appropriate for which situation. In short, I think many of them have all language problems."

In addition, another interviewee reported that grammar lessons should be presented in games so that students would feel fun when they learned English grammar:

"When talking about grammar, many students may feel bored with it. Students make a wall that obstructs their learning success. To solve this problem, I think we should present grammar via games. Students will feel fun if they learn English grammar from playing games"

Based on the results mentioned in the preceding sections, form-focused web-based instruction was worth developing for teaching grammar and writing ability. The course content must be developed in a well-organized procedure and relevant to needs of students as well.

4.2 Course Design

Research Question 2: How could form-focused web-based instruction be developed?

In response to this research question, the framework of language course development of Graves (2000) was employed in this study. The process consisted of analyzing context, articulating the belief, conceptualizing content, formulating goals and objectives of the web-based course, assessing needs, organizing the web-based course and learning modules, developing materials, and designing the assessment plan for the web-based course. By doing this, both of the quantitative and qualitative results gained from the needs analysis process were used in the course development procedure.

4.2.1 Goal and Objectives

The goal and objectives of the course were developed in correspondence with the results of the needs analysis and the goals and objectives of the English Level 1 Course, a course for first-year undergraduate students at Mahidol University, which emphasized the ability to write in the paragraph level. The needs analysis results indicated that grammatical competence had a great effect on the students' writing

abilities. Grammar instruction not only helped students understand meanings of communication but also had an effect on other language skills which were concerned with learners' communication. The findings revealed that students who had grammatical competence usually had confidence in their writing. With such confidence, they would be able to write better than those who lacked grammatical competence. According to these results, the goal and objectives of the course were formulated below:

Goal. By the end of the course, students will have developed the abilities to write with grammatically correct sentences in a paragraph level under the assigned topics.

Objective 1. Students will have an overall understanding of the English grammatical features and structures necessary for writing.

Objective 2. Students will be able to use the English grammatical features and structures to form a paragraph appropriately and accurately

Objective 3. Students will be able to write a well-organized and meaningful paragraph under the assigned topics.

Objective 4. Students will be able to identify and correct English grammatical errors.

4.2.2 Content Areas

The needs analysis results indicated that the content areas derived from the students' disciplines could improve their writing ability because they had sufficient information for writing. With such a familiarity, additionally, they knew how the words had a relationship with each other as well. Because of these reasons, the English grammatical features and structures, which were regarded important for writing, such as word order, verb tenses, subject-verb agreement, parts of speech, types of sentences, determiners and articles, active and passive voices, and run-on sentences and fragments were taught through content areas in sports science.

As shown in Figure 4.1, there were eight topics in sports science shown on the left side, which were types of sports, ethics and legal in sports, sports nutrition, sports equipment, sports marketing, general aspects of sports science, accidents and medical treatment, and sports psychology. All of them were regarded as the most important topics in the fields of sports science based on the needs analysis results. Students could click on the topics and do activities on the website. On the right side, there were some useful links to English grammar and writing games. Students could click on the

names of the games to play them. The middle of the page showed the goal and objectives of the web-based course.
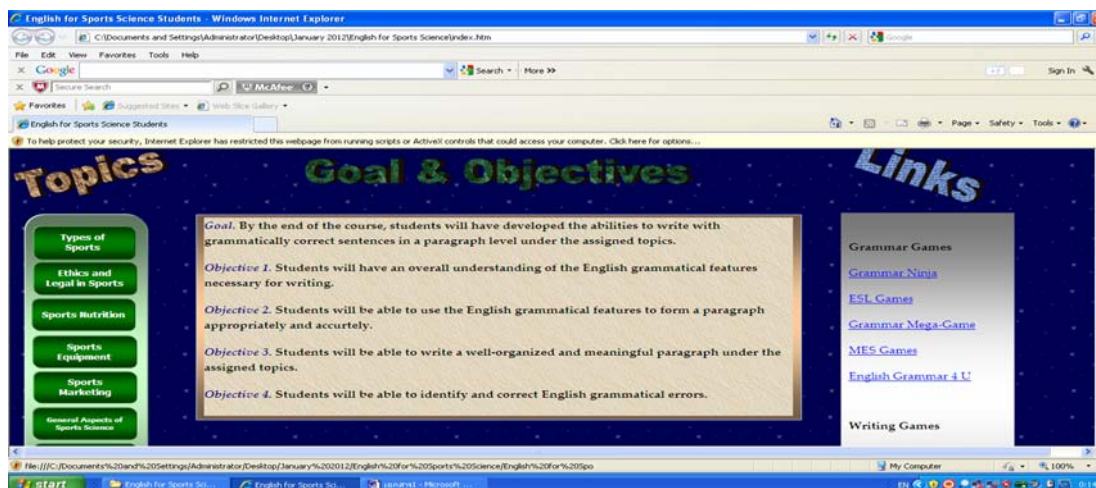
Figure 4.1: The Middle, Left, and Right Sides of the Homepage of the Web-Based Course

On the top of the webpage, there were four icons which linked to Facebook, the weblog, the contact page, and the homepage itself as shown in Figure 4.2. Students could click on the Facebook icon and link to the URL www.facebook.com/noithani. On Facebook, students could post their writing problems or grammatical topics they did not understand. If they wanted to practice writing, they could click on the weblog icon and link to the blog http://noidiary2010.blogspot.com. Facebook was used as another channel for language learning due to the students' suggestion that on the website, students could not ask the teacher questions directly when they had problems or doubts. Therefore, they should be allowed to use Facebook as a means to exchange thoughts, negotiate, and discuss about problems in grammar and writing. Moreover, Facebook was a social networking site that most of them were familiar with and used everyday. Referring to the weblog, the students reported that they would not feel embarrassed if they made a lot of language mistakes on the weblog. They dared to write more. Given here are the reasons why Facebook and weblog were used accompanying the web-based course.

Figure 4.2: The Top Side of the Homepage of the Web-Based Course

After students clicked on the topics in sports science, they could access the lesson page. This page consisted of a grammar lesson, a video presentation, a cloze, and an error recognition test as shown in Figure 4.3.

Figure 4.3: The Lesson Page of the Web-Based Course

When students clicked on the icon "Grammar Lesson," students could see sentences showing how to use English grammatical features and structures with some explanations below the sentences as illustrated in Figure 4.4.
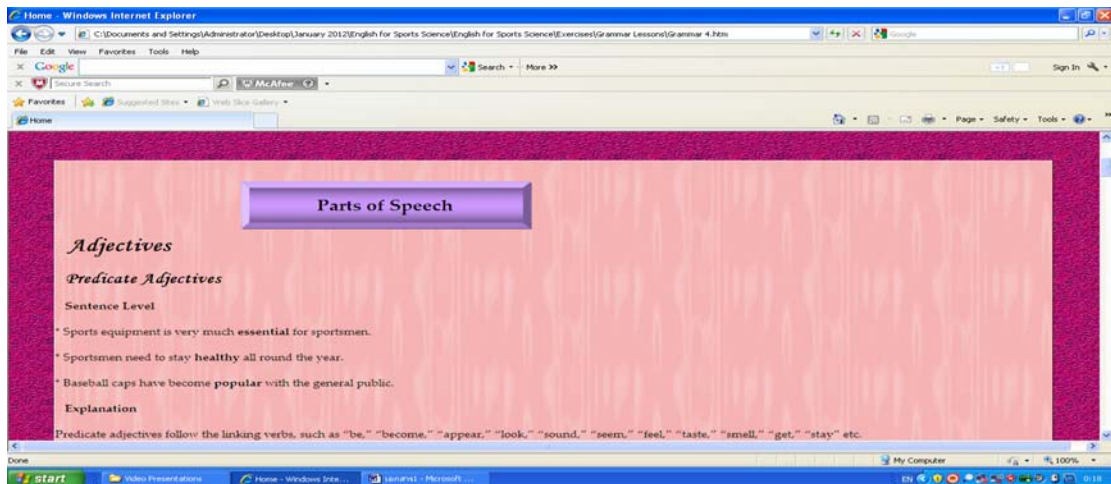
Figure 4.4: The Grammar Lesson Teaching English Grammatical Features and Structure in the Sentence Level

As depicted in Figure 4.5, students could see how to use some English grammmatical features and structures in a paragraph level. The paragraph was added because the needs analysis results indicated that a longer context could help students learn the meaning of communication, and thus memorize grammatical rules and apply them to use with more ease.
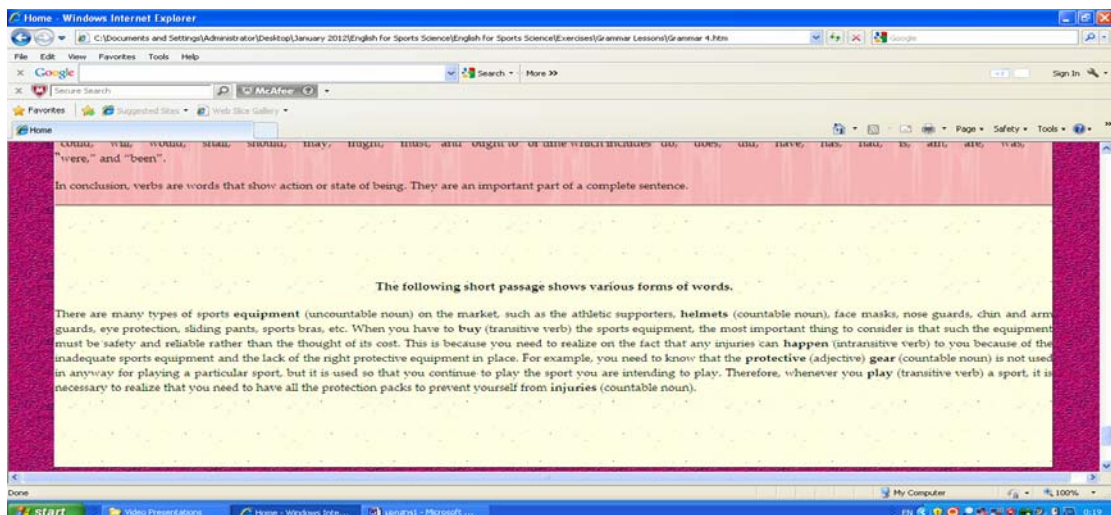
Figure 4.5: The Grammar Lesson Teaching English Grammatical Features and Structure in the Paragraph Level

The video presentation was included in the course based on the students' suggestions that with sounds and pictures, students would have better comprehension of English grammar. As shown in Figure 4.6, students could click on the icon "Video Presentation" to listen to a teacher teaching how to use some English grammatical features and structures in both the sentence and paragraph levels.

Figure 4.6: The Video Presentation Teaching English

Grammatical Features and Structures

After learning from the grammar lesson and video presentation, students could check their comprehension in English grammar and structures by clicking on the exercise icons either "Cloze" or "Error Recognition." They could fill in the blanks using the given words in the parenthesis as illustrated in Figure 4.7.
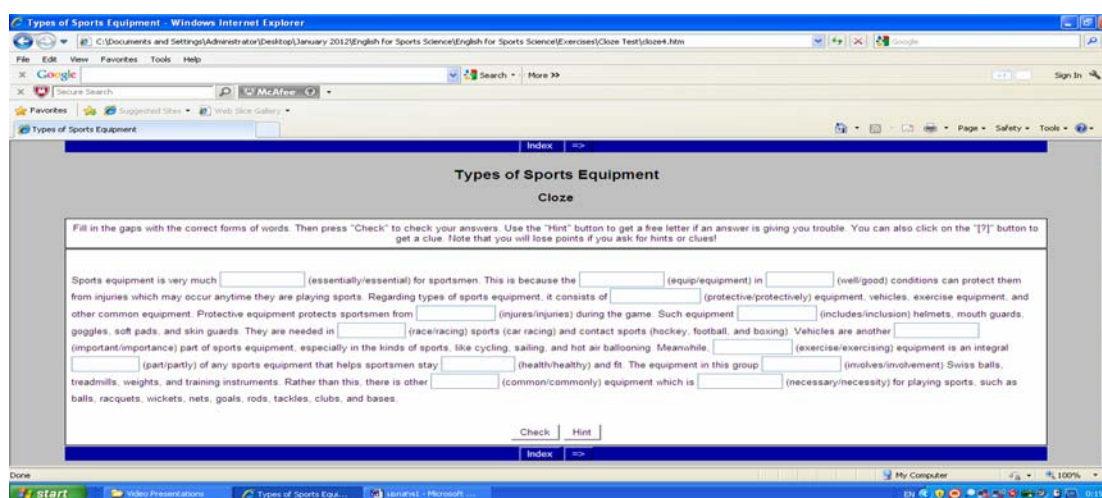
Figure 4.7: The Exercise Page of the Web-Based Course

When students finished the exercise, they could click on the icon "Check" to check the answers as shown in Figure 4.8.
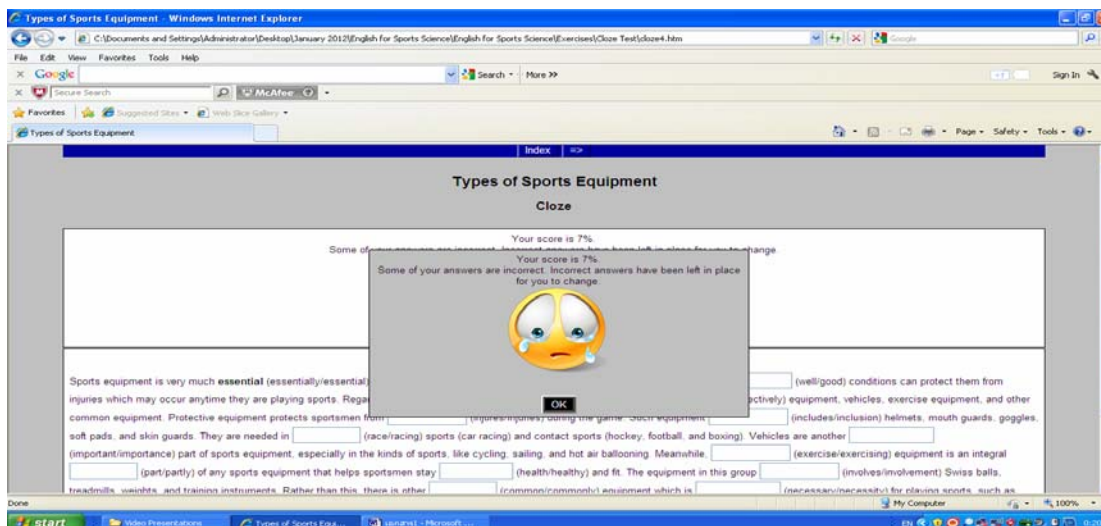
Figure 4.8: The Pop-Up Showing the Score of the Test Takers

Apart from this, students could view examples of pieces of writing by clicking on the icon "Examples of Diary Writing" on the homepage as shown in Figure 4.9.
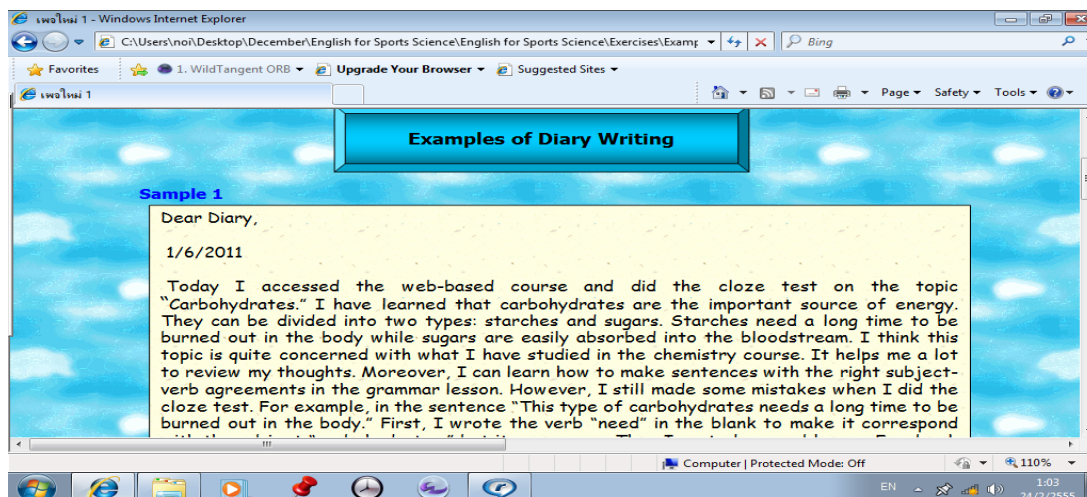
Figure 4.9: Examples of Pieces of Writing

Moreover, if they had any problems, they could click on the icon "Contact" on the top of the homepage as shown in Figure 4.10.
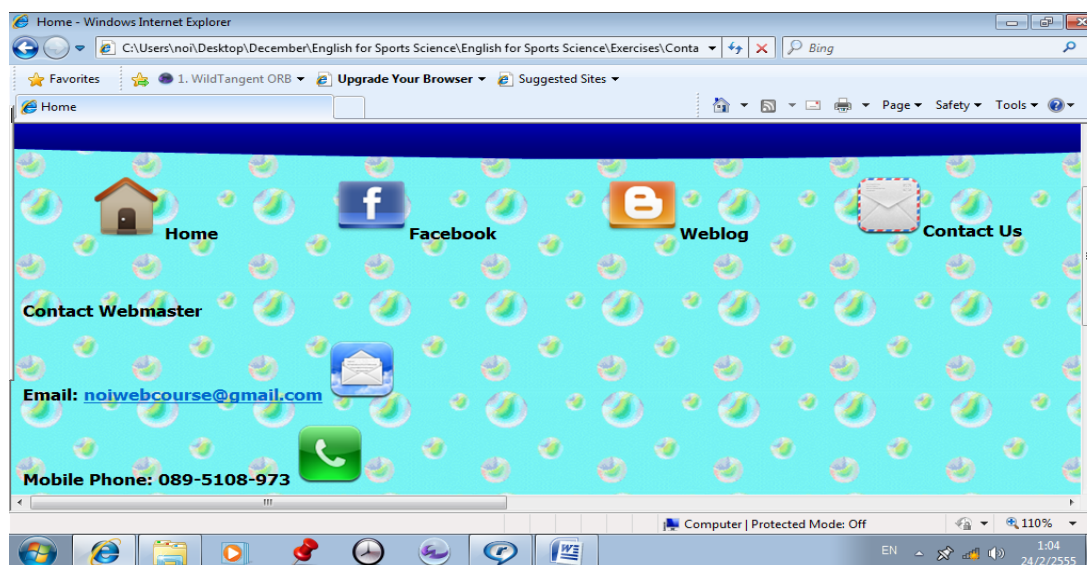
Figure 4.10: Contact Page of the Web-Based Course

All of the aforementioned information shows how the lessons and exercises were organized in the web-based course in general. To see the website on the whole, please visit www.noiwebcourse.com.

4.2.3 Developing Materials

The learning materials included video presentations, grammar lessons, cloze tests, and error recognition tests. The grammatical features and content matters in sports science were derived from the results of the needs analysis. There were eight topics in sports science on the web-based course. Each of them had one grammar lesson which allowed students to either read from the web page or listen to the teacher from the video presentation. There were also two exercises provided for students to check their grammatical compression after they finished learning each lesson. All of these web applications were developed with computer programs. The web pages (homepage, grammar lesson pages, and contact page) were developed by Microsoft Front Page Version 2002. The cloze and error recognition tests were developed by Hot Potatoes Version 6. Meanwhile, the video presentations were developed by Windows Movie Maker.

4.2.4 Designing the Assessment Plan for the Web-Based Course

The students' English grammatical competence and writing ability were examined by both formative and summative assessments. The formative assessment included three pieces of writing they were assigned to do on the weblog and the

worksheets (cloze and error recognition tests) printed out from the web-based course. The purpose of the assessment was to examine the students' progress in their English grammatical competence and writing ability. As for the summative assessment, it was assessed through the pre-test and post-test. The purpose of the assessment was to examine the achievement of English grammatical competence and writing ability of the students.

4.2.5 Course Implementation

The actual course implementation was carried out with 83 first-year undergraduate sports science students at the College of Sports Science and Technology, Mahidol University. The length of time of the web-based course was one semester (from June to September 2011). The students took the pre-test in the first week of June and the post-test in the first week of October. During the course, the students were assigned to write three pieces of writing on the weblog. They were also allowed to ask for some explanations about English grammar and writing on Facebook. The results of the students' discussions on Facebook are shown below.

In the present study, it was found that among the pathways for some discussions on Facebook, 72 students chose chatting with the teacher, nine students posted their problems on the profile page and two of them left messages. It was found that most of the students had some discussions about sentence structures (40 students). For example, participant C asked,

> *"Good morning teacher! How are you? I do not understand about English grammar, especially sentence structure. Can you explain it to me?"*

Twenty students had the problems with word meanings in the English language. For example, participant B asked,

> *"Teacher! How can word forms and word meanings change in context? Can you explain? Sometimes I cannot memorize a large number of words and their meanings. If you know how I can deal with this problem, please answer me soon. Thank you very much."*

Sixteen students had problems with using parts of speech. For example, participant D said,

> *"Teacher! After verb to be, besides putting an adjective, can I put a noun in that place?"*

Four students asked about how to use relative clauses. For example, participant A asked,

> *"Hi teacher! Can you explain how to use relative clauses to me? What are they exactly?"*

As for writing practice, there were three Facebook users who sent their pieces of writing to the teacher on Facebook. For example, participant E wrote,

> *"There are three qualities of good student [plural noun without "s" ending]. First [missing a comma] good students know function [word meaning] of us [pronoun]. That is, intended [word form] study, do homework and make exercises [incomplete sentence]. Second [missing a comma] allocate time [incomplete sentence]. Etc read [subject-verb agreement] a book, exercise [subject-verb agreement] for good health, relax [subject-verb agreement] for fun with friends, and sleep [subject-verb agreement]. Third [missing a comma] focus [word meaning] the goal. Coz [informal word] no a plan seem [subject-verb agreement] no future and no change for good future. To summarize, good student [plural noun without "s" ending] know function [word meaning] of us [pronoun], allocate time, and focus [word meaning] the goal for success in life."*

From the above example, this student had problems with pronouns, subject and verb agreements, plural nouns with -s ending, punctuation, word forms, word meanings, incomplete sentences, and using informal words in this piece of writing. Because of these problems, he decided to post his piece of writing on the profile page of Facebook so that the teacher could view, give suggestions and comments, and correct his grammatical and writing errors.

4.3 Effects of the Form-Focused Web-Based Instruction on the Development of English Grammatical Competence and Writing Ability of Sports Science Students

Research Question 3: What were the effects of the form-focused web-based instruction on the sports science students' English grammatical competence and writing ability?

As a whole, it was found that the students made improvements in English grammatical competence and writing ability after receiving the treatment. As shown in Table 4.22, a statistically significant difference of the pre-test and post-test was found ($t = 6.07$; $p = .000$).

Table 4.22: Comparison between the Total Scores of the Pre-Test and Post-Test Using Paired Samples T Test

Test	N.	Mean	SD	t	Sig. (2-tailed)
Pre-Test	83	60.86	17.65	6.07	.000
Post-Test	83	74.47	11.46		

Furthermore, not only did the whole test results show a statistically significant difference of the mean scores, when separating into grammar and writing issues, students also made improvements in these discrete issues.

4.3.1 Grammatical Competence

a) Formative Assessment

The students' progress in English grammatical competence was examined by the 16 worksheets (eight cloze tests and eight error recognition tests) on the web-based course. From June to September 2011, the students were assigned to do four worksheets for each month starting with the cloze tests ("Outdoor Sports" and "Ethical Responsibilities of a Coach) and the error recognition tests ("Indoor Sports" and "Fair Play") continuously until the end of September. Each worksheet was equal to 100 points. In this study, out of 83 student participants, there were 61 students who submitted all worksheets. According to the results of the worksheets, it was found that the students made progress in their English grammatical competence at significant levels. As shown in Table 4.23, there was a statistically significant difference of the mean scores of the cloze tests (F = 33.142; p = .000). Except for the second worksheet "Ethical Responsibilities of a Coach," it was found that the students got better scores in the cloze tests progressively until the last worksheet "Psychology and Team Controlling" (Mean = 66.36; SD = 24.11) as shown in Table 4.24.

Table 4.23: One-Way ANOVA for the Gain Scores of the Cloze Tests

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	91082.145	7	13011.735	33.142	.000
Within Groups	188448.62	480	392.601		
Total	279530.77	487			

Table 4.24: Descriptive Statistics of the Students' Gain Scores from the Cloze Tests

Worksheet Printed from the Web-Based Course	N	Range	Minimum	Maximum	Mean	SD
1. Outdoor Sports	61	56	11	67	24.49	1.83
2.Ethical Responsibilities of a Coach	61	75	3	78	23.39	13.14
3.Carbohydrates	61	63	10	73	26.31	18.30
4.Types of Sports Equipment	61	68	10	78	28.51	16.63
5.Definitions of Sports Marketing	61	79	9	88	38.11	24.29
6. Sub disciplines in Sports Science	61	68	17	85	44.08	19.08
7.First Aid	61	80	10	90	44.20	24.85
8. Psychology and Team Controlling	61	83	10	93	66.36	24.11

Moreover, based on the Post Hoc Tests, the statistically significant differences of the mean scores gained from the cloze tests were found in almost all of the worksheets. In particular, the eighth worksheet "Psychology and Team Controlling," there were statistically significance differences of the mean scores (p = .000) between this worksheet and all of the earlier assigned worksheets as shown in Table 4.25. This suggests that the students made progress in doing most of the cloze tests.

Table 4.25: Post Hoc Tests for the Gain Scores of the Cloze Tests

Worksheet	Worksheet	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	1.0984	3.58778	1.000	-12.4217	14.6184
	3.00	-1.8197	3.58778	1.000	-15.3397	11.7004
	4.00	-4.0164	3.58778	.990	-17.5364	9.5037
	5.00	-13.6230	3.58778	.046	-27.1430	-.1029
	6.00	-19.5902	3.58778	.000	-33.1102	-6.0701
	7.00	-19.7049	3.58778	.000	-33.2250	-6.1849
	8.00	-41.8689	3.58778	.000	-55.3889	-28.3488
2.00	1.00	-1.0984	3.58778	1.000	-14.6184	12.4217
	3.00	-2.9180	3.58778	.999	-16.4381	10.6020
	4.00	-5.1148	3.58778	.958	-18.6348	8.4053
	5.00	-14.7213	3.58778	.020	-28.2414	-1.2013
	6.00	-20.6885	3.58778	.000	-34.2086	-7.1685
	7.00	-20.8033	3.58778	.000	-34.3233	-7.2832
	8.00	-42.9672	3.58778	.000	-56.4873	-29.4472
3.00	1.00	1.8197	3.58778	1.000	-11.7004	15.3397
	2.00	2.9180	3.58778	.999	-10.6020	16.4381
	4.00	-2.1967	3.58778	1.000	-15.7168	11.3233
	5.00	-11.8033	3.58778	.150	-25.3233	1.7168
	6.00	-17.7705	3.58778	.001	-31.2905	-4.2504
	7.00	-17.8852	3.58778	.001	-31.4053	-4.3652
	8.00	-40.0492	3.58778	.000	-53.5692	-26.5291

Table 4.25: Post Hoc Tests for the Gain Scores of the Cloze Tests (Continued)

Worksheet	Worksheet	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
4.00	1.00	4.0164	3.58778	.990	-9.5037	17.5364
	2.00	5.1148	3.58778	.958	-8.4053	18.6348
	3.00	2.1967	3.58778	1.000	-11.3233	15.7168
	5.00	-9.6066	3.58778	.413	-23.1266	3.9135
	6.00	-15.5738	3.58778	.010	-29.0938	-2.0537
	7.00	-15.6885	3.58778	.009	-29.2086	-2.1685
	8.00	-37.8525	3.58778	.000	-51.3725	-24.3324
5.00	1.00	13.6230	3.58778	.046	.1029	27.1430
	2.00	14.7213	3.58778	.020	1.2013	28.2414
	3.00	11.8033	3.58778	.150	-1.7168	25.3233
	4.00	9.6066	3.58778	.413	-3.9135	23.1266
	6.00	-5.9672	3.58778	.905	-19.4873	7.5528
	7.00	-6.0820	3.58778	.896	-19.6020	7.4381
	8.00	-28.2459	3.58778	.000	-41.7660	-14.7258
6.00	1.00	19.5902	3.58778	.000	6.0701	33.1102
	2.00	20.6885	3.58778	.000	7.1685	34.2086
	3.00	17.7705	3.58778	.001	4.2504	31.2905
	4.00	15.5738	3.58778	.010	2.0537	29.0938
	5.00	5.9672	3.58778	.905	-7.5528	19.4873
	7.00	-.1148	3.58778	1.000	-13.6348	13.4053
	8.00	-22.2787	3.58778	.000	-35.7987	-8.7586
7.00	1.00	19.7049	3.58778	.000	6.1849	33.2250
	2.00	20.8033	3.58778	.000	7.2832	34.3233
	3.00	17.8852	3.58778	.001	4.3652	31.4053
	4.00	15.6885	3.58778	.009	2.1685	29.2086
	5.00	6.0820	3.58778	.896	-7.4381	19.6020
	6.00	.1148	3.58778	1.000	-13.4053	13.6348
	8.00	-22.1639	3.58778	.000	-35.6840	-8.6439
8.00	1.00	41.8689	3.58778	.000	28.3488	55.3889
	2.00	42.9672	3.58778	.000	29.4472	56.4873
	3.00	40.0492	3.58778	.000	26.5291	53.5692
	4.00	37.8525	3.58778	.000	24.3324	51.3725
	5.00	28.2459	3.58778	.000	14.7258	41.7660
	6.00	22.2787	3.58778	.000	8.7586	35.7987
	7.00	22.1639	3.58778	.000	8.6439	35.6840

With respect to the results of the error recognition tests, a statistically significant difference of the mean scores was found ($F = 52.66$; $p = .000$) as shown in Table 4.26. Except the second worksheet "Fair Play," it was found that the students got better scores in the error recognition tests continuously until the last worksheet "Stress of Sportsmen during the Competition" (Mean $= 69.70$; SD $= 21.56$) as shown in Table 4.27.

Table 4.26: One-Way ANOVA for the Gain Scores of the Error Recognition Tests

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	138028.42	7	19718.346	52.66	.000
Within Groups	179735.44	480	374.449		
Total	317763.87	487			

Table 4.27: Descriptive Statistics of the Students' Gain Scores from the Error Recognition Tests

Worksheet Printed from the Web-Based Course	N	Range	Minimum	Maximum	Mean	SD
1. Indoor Sports	61	71	10	81	21.98	16.87
2. Fair Play	61	64	6	70	21.28	14.86
3. Nutrients	61	67	6	73	29.26	19.26
4. A Ball	61	67	6	73	30.49	19.43
5. Jobs in Sports Management	61	78	5	83	41.05	20.84
6. Four Main Streams in Sports Science	61	71	14	85	53.08	16.62
7. Body Testing	61	72	13	85	58.18	23.81
8. Stress of Sportsmen during the Competition	61	84	6	90	69.70	21.56

In addition, according to the Post Hoc Tests, the statistically significant differences of the mean scores gained from the error recognition tests were found in almost all of the worksheets as shown in Table 4.28. This suggests that the students made progress in doing most of the error recognition tests on the web-based course.

Table 4.28: Post Hoc Tests for the Gain Scores of the Error Recognition Tests

Worksheet	Worksheet	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1.00	2.00	.7049	3.50386	1.000	-12.4989	13.9087
	3.00	-7.2787	3.50386	.742	-20.4825	5.9251
	4.00	-8.5082	3.50386	.553	-21.7120	4.6956
	5.00	-19.0656	3.50386	.000	-32.2694	-5.8618
	6.00	-31.0984	3.50386	.000	-44.3022	-17.8946
	7.00	-36.1967	3.50386	.000	-49.4005	-22.9929
	8.00	-47.7213	3.50386	.000	-60.9251	-34.5175
2.00	1.00	-.7049	3.50386	1.000	-13.9087	12.4989
	3.00	-7.9836	3.50386	.637	-21.1874	5.2202
	4.00	-9.2131	3.50386	.439	-22.4169	3.9907
	5.00	-19.7705	3.50386	.000	-32.9743	-6.5667
	6.00	-31.8033	3.50386	.000	-45.0071	-18.5995
	7.00	-36.9016	3.50386	.000	-50.1054	-23.6978
	8.00	-48.4262	3.50386	.000	-61.6300	-35.2224

Table 4.28: Post Hoc Tests for the Gain Scores of the Error Recognition Tests (Continued)

Worksheet	Worksheet	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
3.00	1.00	7.2787	3.50386	.742	-5.9251	20.4825
	2.00	7.9836	3.50386	.637	-5.2202	21.1874
	4.00	-1.2295	3.50386	1.000	-14.4333	11.9743
	5.00	-11.7869	3.50386	.128	-24.9907	1.4169
	6.00	-23.8197	3.50386	.000	-37.0235	-10.6159
	7.00	-28.9180	3.50386	.000	-42.1218	-15.7142
	8.00	-40.4426	3.50386	.000	-53.6464	-27.2388
	8.00	-39.2131	3.50386	.000	-52.4169	-26.0093
4.00	1.00	8.5082	3.50386	.553	-4.6956	21.7120
	2.00	9.2131	3.50386	.439	-3.9907	22.4169
	3.00	1.2295	3.50386	1.000	-11.9743	14.4333
	5.00	-10.5574	3.50386	.250	-23.7612	2.6464
	6.00	-22.5902	3.50386	.000	-35.7940	-9.3864
	7.00	-27.6885	3.50386	.000	-40.8923	-14.4847
	8.00	-39.2131	3.50386	.000	-52.4169	-26.0093
5.00	1.00	19.0656	3.50386	.000	5.8618	32.2694
	2.00	19.7705	3.50386	.000	6.5667	32.9743
	3.00	11.7869	3.50386	.128	-1.4169	24.9907
	4.00	10.5574	3.50386	.250	-2.6464	23.7612
	6.00	-12.0328	3.50386	.110	-25.2366	1.1710
	7.00	-17.1311	3.50386	.001	-30.3349	-3.9273
	8.00	-28.6557	3.50386	.000	-41.8595	-15.4519
6.00	1.00	31.0984	3.50386	.000	17.8946	44.3022
	2.00	31.8033	3.50386	.000	18.5995	45.0071
	3.00	23.8197	3.50386	.000	10.6159	37.0235
	4.00	22.5902	3.50386	.000	9.3864	35.7940
	5.00	12.0328	3.50386	.110	-1.1710	25.2366
	7.00	-5.0984	3.50386	.953	-18.3022	8.1054
	8.00	-16.6230	3.50386	.002	-29.8267	-3.4192
7.00	1.00	36.1967	3.50386	.000	22.9929	49.4005
	2.00	36.9016	3.50386	.000	23.6978	50.1054
	3.00	28.9180	3.50386	.000	15.7142	42.1218
	4.00	27.6885	3.50386	.000	14.4847	40.8923
	5.00	17.1311	3.50386	.001	3.9273	30.3349
	6.00	5.0984	3.50386	.953	-8.1054	18.3022
	8.00	-11.5246	3.50386	.150	-24.7284	1.6792
8.00	1.00	47.7213	3.50386	.000	34.5175	60.9251
	2.00	48.4262	3.50386	.000	35.2224	61.6300
	3.00	40.4426	3.50386	.000	27.2388	53.6464
	4.00	39.2131	3.50386	.000	26.0093	52.4169
	5.00	28.6557	3.50386	.000	15.4519	41.8595
	6.00	16.6230	3.50386	.002	3.4192	29.8267
	7.00	11.5246	3.50386	.150	-1.6792	24.7284

As proved by the statistically significant differences found in most of the worksheets printed out from the web-based course, this suggests that the students' English grammatical competence improved.

b) Summative Assessment

The grammar parts of the pre-test and post-test consisted of cloze and error recognition tests. The cloze tests contained 25 items with choices (a, b, c, d) while the error recognition tests consisted of 15 items (five right items and ten errors). The students were required to specify whether the item was right or wrong. They also had to correct the wrong ones. According to the results of the tests, it was found that there was a statistically significant difference of the mean scores in the grammar parts (t = 6.55; p = .000) as shown in Table 4.29. This indicates that the students' English grammar significantly improved after receiving the instruction.

Table 4.29: Comparison between the Scores the Students Gained in the Grammar Parts of the Pre-Test and Post-Test Using Paired Samples T Test

Test	N.	Mean	SD	t	Sig. (2-tailed)
Pre-Test	83	34.10	9.25	6.55	.000
Post-Test	83	42.37	7.01		

In addition to this, there were also statistically significant differences of the mean scores in the cloze tests (t = 6.64; p = .000) and error recognition tests (t = 5.00; p = .000) as shown in Tables 4.30 and 4.31. This suggests that the students showed improvement in the cloze and error recognition tests of the post-test at significant levels.

Table 4.30: Comparison between the Scores the Students Gained in the Cloze Tests of the Pre-Test and Post-Test Using Paired Samples T Test

Test	N.	Mean	SD	t	Sig. (2-tailed)
Pre-Test	83	19.14	5.60	6.64	.000
Post-Test	83	23.47	2.54		

Table 4.31: Comparison between the Scores the Students Gained in the Error Recognition Tests of the Pre-Test and Post-Test Using Paired Samples T Test

Test	N.	Mean	SD	t	Sig. (2-tailed)
Pre-Test	83	14.95	5.24	5.00	.000
Post-Test	83	19.08	5.76		

Moreover, the facility values indicated that there were a larger number of students who chose the correct answers in the post-test. As shown in Table 4.32 and 4.33, the students were able to choose more correct answers in the post-test. The average values of item facility in the cloze tests increased from 0.66 in the pre-test to

0.89 in the post-test. Meanwhile, the average values of item facility in the error recognition tests increased from 0.62 in the pre-test to 0.78 in the post-test. This does not mean that the post-test was easier than the pre-test because when these two tests had been piloted with 27 students before the research implementation, the average values of item facility were not too different. The average values of item facility in the cloze tests were 0.45 in the pre-test and 0.48 in the post-test, while those in the error recognition tests were 0.41 in the pre-test and 0.42 in the post-test. According to these results, the increased values of item facility may have resulted from the achievement of the students in learning English grammatical features.

Table 4.32: Facility Values in the Cloze Tests Comparing between the Pre-Test and the Post-Test

	Pre-Test		Post-Test	
Items	**Item Facility**	**Grammatical Features the Item Tests**	**Item Facility**	**Grammatical Features the Item Tests**
1	0.58	Parts of Speech	1.00	Subject-Verb Agreement
2	0.87	Determiners: Articles (a, an, the)	0.91	Possessive Determiners
3	0.62	Subject-Verb Agreement/ Verb Tenses	0.83	Subject-Verb Agreement/ Active and Passive Voices
4	0.64	Parts of Speech	0.85	Parts of Speech
5	0.27	Subject-Verb Agreement/ Verb Tenses	0.85	Parts of Speech
6	0.71	Possessive Determiners	0.85	Subject-Verb Agreement/ Active and Passive Voices
7	0.60	Parts of Speech	0.89	Parts of Speech
8	0.78	Subject-Verb Agreement/ Verb Tenses	0.85	Possessive Determiners
9	0.69	Determiners: Articles (a, an, the)	0.91	Determiners: Articles (a, an, the)
10	0.51	Subject-Verb Agreement/ Verb Tenses	0.89	Subject-Verb Agreement/ Verb Tenses
11	0.56	Subject-Verb Agreement/ Verb Tenses	0.85	Subject-Verb Agreement/ Active and Passive Voices
12	0.95	Subject-Verb Agreement/ Verb Tenses	0.89	Parts of Speech
13	0.87	Possessive Determiners	0.74	Active and Passive Voices/ Verb Tenses
14	0.60	Active and Passive Voices	0.96	Determiners: Articles (a, an, the)
15	0.58	Subject-Verb Agreement/ Verb Tenses	0.91	Parts of Speech
16	0.51	Subject-Verb Agreement/ Verb Tenses	0.98	Subject-Verb Agreement/ Active and Passive Voices
17	0.87	Parts of Speech	0.96	Subject-Verb Agreement/ Active and Passive Voices
18	0.82	Subject-Verb Agreement/ Verb Tenses	0.98	Possessive Determiners
19	0.60	Determiners (this, that, these, those)	0.91	Determiners: Articles (a, an, the)

Table 4.32: Facility Values in the Cloze Tests Comparing between the Pre-Test and the Post-Test (Continued)

	Pre-Test		Post-Test	
Items	**Item Facility**	**Grammatical Features the Item Tests**	**Item Facility**	**Grammatical Features the Item Tests**
20	0.56	Parts of Speech	0.89	Subject-Verb Agreements
21	0.87	Active and Passive Voices	0.85	Determiners: Articles (a, an, the)
22	0.45	Parts of Speech	0.89	Parts of Speech
23	0.89	Subject-Verb Agreement	0.87	Subject-Verb Agreement/ Active and Passive Voices
24	0.67	Parts of Speech	0.83	Subject-Verb Agreement/ Active and Passive Voices
25	0.49	Parts of Speech	0.91	Parts of Speech

Table 4.33: Facility Values in the Error Recognition Tests Comparing between the Pre-Test and the Post-Test

	Pre-Test			Post-Test		
Items	**Item Facility (Right or Wrong)**	**Item Facility (Correcting the Errors)**	**Grammatical Features the Item Tests**	**Item facility (Right or Wrong)**	**Item facility (Correcting the Errors)**	**Grammatical Features the Item Tests**
1	0.77	0.67	Parts of Speech	0.88	0.83	Subject-Verb Agreement
2	0.89		Parts of Speech	0.89	0.84	Parts of Speech
3	0.20	0.20	Parts of Speech	0.83	0.83	Active and Passive Voices
4	0.57	0.48	Subject-Verb Agreement	0.84	0.83	Articles
5	0.82		Active and Passive Voices/Subject-Verb Agreement	0.86	0.54	Possessive Determiners
6	0.80		Parts of Speech	0.88		Determiner (this)
7	0.78	0.63	Possessive Determiner s	0.37	0.37	Verb Tenses
8	0.72	0.54	Articles	0.88		Articles
9	0.76	0.69	Subject-Verb Agreement	0.86	0.83	Determiners (numbers)
10	0.82	0.73	Subject-Verb Agreement	0.88		Articles
11	0.89		Parts of Speech	0.84	0.37	Active and Passive Voices
12	0.72	0.11	Active and Passive Voices/ Subject-Verb Agreement	0.83	0.83	Parts of Speech
13	0.89		Articles	0.89		Verb Tenses
14	0.23	0.18	Verb Tenses	0.89		Articles
15	0.84	0.69	Verb Tenses	0.86	0.76	Parts of Speech

According to the aforementioned information, there were statistically significant differences of gain scores in the grammar parts of the pre-test and post-test. Apart from this, as found in the results of item facility, the students were able to choose the answers in the cloze and error recognition tests better in the post-test. This suggests that the students had a greater achievement of English grammatical competence.

4.3.2 Writing Ability

a) Formative Assessment

Besides the students' assignment of worksheets on the web-based course, students were also assigned to write three pieces of writing ("Introducing Myself?," "My Hometown," and "My Life on Salaya Campus") on the weblog. During this process, there were 83 students who participated in these writing activities. They needed to write at least 100 words for each piece of writing. The grading criteria were adapted from the Faculty of Liberal Arts, Mahidol University. It comprises contents (15 points), punctuation (10 points), paragraph organization (10 points), and grammar rules and usage (15 points). To ascertain the reliability of the scoring process, their pieces of writing were graded by two raters and then the scoring results were analyzed (inter-rater reliability co-efficient $\alpha = 0.88$ in the first piece of writing, $\alpha = 0.93$ in the second piece of writing, and $\alpha = 0.92$ in the third piece of writing). The results showed that there was a difference of the gain scores of these three pieces of writing at a significant level (F = 10.355; p = .000) as shown in Table 4.34. The mean scores of the students' pieces of writing increased continuously from the first piece of writing (Mean = 31.06; SD = 7.11), to the second piece of writing (Mean = 31.69; SD = 7.46), and to the third piece of writing (Mean = 40.19; SD = 3.76) as shown in Table 4.35.

Table 4.34: One-Way ANOVA for the Gain Scores of the Three Pieces of Writing

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	831.500	2	415.750	10.355	.000
Within Groups	1806.813	246	40.151		
Total	2638.313	248			

Table 4.35: Descriptive Statistics of the Students' Gain Scores from the Three Pieces of Writing

Piece of Writing	N	Range	Minimum	Maximum	Mean	SD
Introducing Myself	83	25	20	45	31.06	7.11
My Hometown	83	27	20	47	31.69	7.46
My Life on Salaya Campus	83	16	31	47	40.19	3.76

Moreover, it was found that the students were able to write using more meaningful contents with a better organized paragraph, especially in their third pieces of writing. They were also able to use accurate English grammatical features and punctuation marks. As shown in Tables 4.36, 4.37, and 4.38, the average mean scores in contents, punctuation, paragraph organization, and grammar rules and usage increased from 9.13, 6.94, 6.56, and 8.44, respectively in the first piece of writing, to 8.56, 7.19, 7.06, and 8.88 in the second piece of writing, and to 13.13, 7.94, 8.75, and 10.38 in the third piece of writing, respectively.

Table 4.36: Descriptive Statistics of the Students' Gain Scores in Content, Punctuation, Paragraph Organization, and Grammar Rules and Usage of the First Piece of Writing

Writing Criteria	N	Range	Minimum	Maximum	Mean	SD
Content	83	10	5	15	9.13	3.07
Punctuation	83	6	4	10	6.94	1.65
Paragraph Organization	83	6	4	10	6.56	1.82
Grammar Rules and Usage	83	9	5	14	8.44	2.53

Table 4.37: Descriptive Statistics of the Students' Gain Scores in Content, Punctuation, Paragraph Organization, and Grammar Rules and Usage of the Second Piece of Writing

Writing Criteria	N	Range	Minimum	Maximum	Mean	SD
Content	83	10	5	15	8.56	2.97
Punctuation	83	5	5	10	7.19	1.38
Paragraph Organization	83	5	5	10	7.06	1.73
Grammar Rules and Usage	83	8	5	13	8.88	2.55

Table 4.38: Descriptive Statistics of the Students' Gain Scores in Content, Punctuation, Paragraph Organization, and Grammar Rules and Usage of the Third Piece of Writing

Writing Criteria	N	Range	Minimum	Maximum	Mean	SD
Content	83	4	11	15	13.13	1.15
Punctuation	83	4	6	10	7.94	1.00
Paragraph Organization	83	3	7	10	8.75	0.86
Grammar Rules and Usage	83	8	6	14	10.38	2.78

In addition, when comparing the mean scores of these three pieces of writing, there were statistically significant differences of the third piece of writing with the first piece of writing (p = .001) and the second piece of writing (p = .002) as shown in Table 4.39. This suggests that the students' English writing ability improved at a significant level.

Table 4.39: Post Hoc Tests for the Gain Scores of the Three Pieces of Writing

Piece of Writing	Piece of Writing	Mean Difference	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	-.6250	2.24030	.962	-6.2964	5.0464
	3	-9.1250	2.24030	.001	-14.7964	-3.4536
2	1	.6250	2.24030	.962	-5.0464	6.2964
	3	-8.5000	2.24030	.002	-14.1714	-2.8286
3	1	9.1250	2.24030	.001	3.4536	14.7964
	2	8.5000	2.24030	.002	2.8286	14.1714

With respect to the errors found in the three pieces of writing, as shown in Tables 4.40, 4.41, and 4.42, it was found that the students' writing errors decreased from 421 errors in the first pieces of writing, to 228 errors in the second pieces of writing, and to 190 errors in the third pieces of writing. The errors of using auxiliary verbs, pronouns, infinitives, and past simple tenses that were found in the first pieces of writing were not found in the second pieces of writing. As for the third pieces of writing, the errors of using possessive determiners, pronouns, any and some, word order, word forms, and parts of speech as could be found in the first and the second pieces of writing were not found in these last pieces of writing.

Table 4.40: Types of Writing Errors Found in the Students' First Pieces of Writing on the Weblog

Types of Writing Errors	Frequency (Number of Word Errors)	Percent (%) Compared to Other Writing Errors	Types of Writing Errors	Frequency (Number of Word Errors)	Percent (%) Compared to Other Writing Errors
Nouns	17	4.04	Word Meanings	10	2.38
Verbs	5	1.19	Word Forms	2	0.48
Auxiliary Verbs	4	0.95	Subject-Verb Agreement	7	1.66
Possessive Determiners	2	0.48	Incomplete Sentences	19	4.51
Prepositions	28	6.65	Run-On	7	1.66
Articles	23	5.46	Fragment	10	2.38
Pronouns	1	0.24	Using Incorrect Parts of Speech	6	1.43

Table 4.40: Types of Writing Errors Found in the Students' First Pieces of Writing on the Weblog (Continued)

Types of Writing Errors	Frequency (Number of Word Errors)	Percent (%) Compared to Other Writing Errors	Types of Writing Errors	Frequency (Number of Word Errors)	Percent (%) Compared to Other Writing Errors
Infinitives	1	0.24	Past Simple	3	0.71
Gerunds	10	2.38	Spelling	66	15.68
Conjunctions	1	0.24	Capitalization	136	32.30
Any/Some	1	0.24	Punctuation	54	12.83
Word Order	8	1.90	Total	421	100

Table 4.41: Types of Writing Errors Found in the Students' Second Pieces of Writing on the Weblog

Types of Writing Errors	Frequency (Number of Word Errors)	Percent (%) Compared to Other Writing Errors	Types of Writing Errors	Frequency (Number of Word Errors)	Percent (%) Compared to Other Writing Errors
Nouns	12	5.26	Word Forms	2	0.88
Verbs	1	0.44	Subject-Verb Agreement	12	5.26
Modal Verbs	2	0.88	Incomplete Sentences	11	4.82
Adverbs of Frequency	1	0.44	Run-On	10	4.39
Possessive Determiners	13	5.70	Fragment	12	5.26
Gerunds	2	0.88	Using Incorrect Parts of Speech	1	0.44
Prepositions	13	5.70	Present Simple	1	0.44
Articles	18	7.89	Future Simple	1	0.44
Conjunctions	7	3.07	Spelling	33	14.47
Any/Some	1	0.44	Capitalization	44	19.30
Word Order	2	0.88	Punctuation	20	8.77
Word Meanings	9	3.95	Total	228	100

Table 4.42: Types of Writing Errors Found in the Students' Third Pieces of Writing on the Weblog

Types of Writing Errors	Frequency (Number of Word Errors)	Percent (%) Compared to Other Writing Errors	Types of Writing Errors	Frequency (Number of Word Errors)	Percent (%) Compared to Other Writing Errors
Nouns	12	6.32	Subject-Verb Agreement	7	3.68
Verbs	2	1.05	Incomplete Sentences	6	3.16

Table 4.42: Types of Writing Errors Found in the Students' Third Pieces of Writing on the Weblog (Continued)

Types of Writing Errors	Frequency (Number of Word Errors)	Percent (%) Compared to Other Writing Errors	Types of Writing Errors	Frequency (Number of Word Errors)	Percent (%) Compared to Other Writing Errors
Auxiliary Verbs	3	1.58	Run-On	4	2.11
Modal Verbs	1	0.53	Fragment	23	12.11
Infinitives	3	1.58	Past Simple	2	1.05
Gerunds	1	0.53	Past Continuous	2	1.05
Prepositions	13	6.84	Unparalleled Verb Tenses	2	1.05
Articles	14	7.37	Spelling	34	17.89
Relative Pronouns	1	0.53	Capitalization	34	17.89
Conjunctions	1	0.53	Punctuation	8	4.21
Word Meanings	16	8.42	Transition Signals	1	0.53
			Total	190	100

To shed more light on the students' progress in their English writing ability, the following extracts show how the same student made a progress in his pieces of writing:

Topic 1: Introducing Myself

> "My first name is Pramote. I am at Bangkok *[preposition]* in *[redundant preposition]* Thailand. I am single. I believe in Islamic teaching. I have been studying *[verb tenses]* English for 10 years and I like it. I am a freshman. I practice meditation every day *[word form]*. *[missing a preposition]*The future *[missing a comma]* I would like to be a government official."

Topic 2: My Hometown

> "There are many interesting *[incomplete sentence: missing an object]* in my hometown. It is the capital city of Thailand. It's *[possessive determiner form]* name is Bangkok. Major attractions of interest is *[subject-verb agreement]* the Suan Lum Night Bazaar. There is also *[missing an article]* important tourist attraction is Temple of the Emerald Buddha (Wat Phra Kaew) *[run-on sentence]* which is on the terrace of the temple has beautiful mural paintings on the Ramayana and the longest in the world *[run-on sentence]*. To sum up *[missing a comma]* Bangkok is a good place to visit."

Topic 3: My Life on Salaya Campus

> "There are many new thing *[word form]* that I can learn and join in Salaya campus. I can make new friends here. They are very friendly and they are good friends. Every

morning, I need to get up at 06.30 am to take a shower. Then I have my breakfast at 08.00 am. I studies [subject-verb agreement] 13 classes. I and my friends have lunch at the cafeteria. I like to eat rice and curry for my lunch. I like social class. After class, I need to practice football with my friends. To sum up, even though my life in Salaya is not easy, I love my friends, I love football, I love to stay and study here."

Based on the above extracts of writing, it was found that this participant had made various types of errors, such as prepositions, verb tenses, word forms, punctuation, incomplete sentences, possessive determiners, subject and verb agreements, articles, and run-on sentences in his first and second pieces t of writing. However, in his third piece of writing, he had a few errors of word forms and subject and verb agreement. This suggests that this student's writing ability had improved.

All of these are the evidence to prove that the students could make some more progress in their English writing ability.

b) Summative Assessment

The students were assigned to write in the topic "My Favorite Sport" in the pre-test and the topic "My Weight" in the post-test. To ascertain the reliability of the scoring process of the tests, the writing parts of the tests were graded by two raters and then the scoring results were analyzed (inter-rater reliability co-efficient $\alpha = 0.97$ in the pre-test and $\alpha = 0.96$ in the post-test). The pieces of writing were graded using the criteria adapted from the Faculty of Liberal Arts, Mahidol University. It comprises contents (15 points), punctuation (10 points), paragraph organization (10 points), and grammar rules and usage (15 points). The finding of the paired samples t test shows that there were statistically significant differences of the mean scores in the writing parts ($t = 2.98$, $p = .004$) as shown in Table 4.43. The students' gained scores in the writing part of the post-test was at a significant level.

Table 4.43: Comparison between the Pre-Test and the Post-Test Writing Scores Using Paired Samples T Test

Test	N.	Mean	SD	t	Sig. (2-tailed)
Pre-Test	83	26.76	11.60	2.98	.004
Post-Test	83	31.76	9.86		

Besides a statistically significant difference of the mean scores ($t = 2.98$; $p = .004$) between the pre-test and post-test as shown in Table 4.43, it was found that the students were able to write better using more meaningful contents under a well-

organized paragraph in the post-test. They were able to use accurate English grammatical features and punctuation marks. As shown in Tables 4.44 and 4.45, the average mean scores in contents, punctuation, paragraph organization, and grammar rules and usage increased from 8.48, 5.80, 5.25, and 7.29, respectively in the pre-test to 10.12, 6.48, 5.84, and 9.42, respectively in the post-test. From these findings, it can be concluded that the students had a greater achievement in English writing ability.

Table 4.44: Descriptive Statistics of the Students' Scores in Content, Punctuation, Paragraph Organization, and Grammar Rules and Usage of the Pre-Test

Writing Criteria	N	Range	Minimum	Maximum	Mean	SD
Content	83	15	0	15	8.48	3.71
Punctuation	83	10	0	10	5.80	3.07
Paragraph Organization	83	10	0	10	5.25	3.02
Grammar Rules and Usage	83	15	0	15	7.29	3.61

Table 4.45: Descriptive Statistics of the Students' Scores in Content, Punctuation, Paragraph Organization, and Grammar Rules and Usage of the Post-Test

Writing Criteria	N	Range	Minimum	Maximum	Mean	SD
Content	83	12	3	15	10.12	2.94
Punctuation	83	10	0	10	6.48	2.45
Paragraph Organization	83	10	0	10	5.84	3.15
Grammar Rules and Usage	83	15	0	15	9.42	3.06

Not only could the students get higher scores in their English writing, but the number of word errors also dramatically decreased from 615 words found in the pre-test to 371 words in the post-test as shown in Tables 4.46 and 4.47 . In addition to this, there were no errors of active and passive voices, run-on sentences, present perfect tense, present simple tense, and past simple tense in the post-test.

Table 4.46: Types of Writing Errors Found in the Pre-Test

Types of Writing Errors	Frequency (Number of Word Errors)	Percent (%) Compared to Other Writing Errors	Types of Writing Errors	Frequency (Number of Word Errors)	Percent (%) Compared to Other Writing Errors
Nouns	70	11.38	Passive Voice	18	2.93
Verbs	8	1.30	Active Voice	1	0.16
Modal Verbs	13	2.11	Word Order	9	1.46
Auxiliary Verbs	2	0.33	Word Meanings	7	1.14
Adverbs	14	2.28	Subject-Verb Agreement	21	3.41

Table 4.46: Types of Writing Errors Found in the Pre-Test (Continued)

Types of Writing Errors	Frequency (Number of Word Errors)	Percent (%) Compared to Other Writing Errors	Types of Writing Errors	Frequency (Number of Word Errors)	Percent (%) Compared to Other Writing Errors
Adjectives	14	2.28	Incomplete Sentences	77	12.52
Prepositions	23	3.74	Run-On	10	1.63
Articles	90	14.63	Present Perfect	7	1.14
Quantifiers	2	0.33	Present Simple	1	0.16
Pronouns	12	1.95	Past Simple	7	1.14
Infinitives	5	0.81	Spelling	117	19.02
Gerunds	3	0.49	Capitalization	56	9.11
Conjunctions	2	0.33	Punctuation	20	3.25
Relative Pronouns	6	0.98	**Total**	**615**	**100**

Table 4.47: Types of Writing Errors Found in the Post-Test

Types of Writing Errors	Frequency (Number of Word Errors)	Percent (%) Compared to Other Writing Errors	Types of Writing Errors	Frequency (Number of Word Errors)	Percent (%) Compared to Other Writing Errors
Nouns	52	14.02	Conjunctions	9	2.43
Verbs	34	9.16	Relative Pronouns	1	0.27
Modal Verbs	1	0.27	Word Order	17	4.58
Auxiliary Verbs	9	2.43	Word Meanings	5	1.35
Adverbs	4	1.08	Subject-Verb Agreement	9	2.43
Adjectives	5	1.35	Incomplete Sentences	47	12.67
Prepositions	21	5.66	Spelling	62	16.71
Articles	27	7.28	Capitalization	20	5.39
Quantifiers	1	0.27	Punctuation	15	4.04
Pronouns	10	2.70	Comparative	2	0.54
Infinitives	1	0.27	Determiners (this, that, these, those)	4	1.08
Gerunds	15	4.04	**Total**	**371**	**100**

To shed more light on the achievement of the students' writing ability, the following extracts of writing show how the same student made a progress in her writing:

Topic 1: My Favorite Sport

*"My favorite sport is Tennis [**capitalization**] which an international sport [**incomplete clause: missing a verb**]. I can play it in tennis court [**missing an article**]. It is an*

outdoor sport. It can play [passive voice form] in single [word form] and team. If you play in single [word form], it needs two players. If you play in team [missing an article], it needs four players. The rule of tennis sport [redundant word], you have to hit the ball across the net but not over than the line. If over the line [incomplete clause: missing a subject and a verb], it means out and needs [passive voice form] to surf again. I always play tennis. I know many famous players. This sport make [subject-verb agreement] you healthy and strong. There is also disadvantages [subject-verb agreement], tennis can make your arm become bigger because the Recket [capitalization and spelling] is very heavy.”

Topic 2: My Weight

“I consider myself overweight. I am 160 centimeters tall. I weigh 56 kilograms. I have a good weight loss idea which is to limit the amount of calories, but sometimes I find that it is so hard for me to manage. This is because I need to reduce the amount of my favorite junk food. Also, I am a fast eater, and I usually eat more than three meals a day. It seem [subject-verb agreement] that I tend to have fats and protein more than other food groups. I like to eat pizza, especially Hawaiian with chees [spelling]. I think it is unhealthy for me to have this type of food.”

According to the above examples, it can be seen that this participant had many writing errors on the first topic, such as capitalization, incomplete clauses, articles, passive voice, word forms, redundant words, subject and verb agreement, and spelling. However, in her second piece of writing, she had only two minor errors of subject and verb agreement and spelling.

The aforementioned information shows that there was a statistically significant difference of the mean scores in the writing parts of the pre-test and post-test. The students could write meaningful contents, develop well-organized paragraphs, and use accurate English grammatical features and punctuation marks better in the post-test. Their writing errors were reduced and some of them disappeared in the post-test as well. These findings suggest that the students had a greater achievement in their English writing ability.

4.4 Attitudes of Sports Science Students toward the Instruction in Enhancing their English Grammatical Competence and Writing Ability

Research Question 4: What were the attitudes of sports science students toward the form-focused web-based instruction?

The results in this part were used to find out whether the sports science students had positive or negative attitudes toward the form-focused web-based instruction in enhancing their English grammatical competence and writing ability. The data were collected from 83 first-year undergraduate students at the College of Sports Science and Technology, Mahidol University. The results gained from the questionnaires and the interviews are described below.

4.4.1 Questionnaire

Part 1: Demographic Characteristic Data

Since they were the same group of students who participated in the needs analysis process, most of their demographic characteristic data were still same. With this reason, in this part the researcher shows only the students' attitudes toward their overall English grammatical competence and writing ability after the treatment as well as the frequency they visited the web-based course, weblog, and Facebook. According to their English grammatical competence and writing ability, one third of them (32.5%) rated that they had good competence and another 32.5% with fair competence followed by 24.1% with very good competence, 9.6% with excellent competence, and 1.2% with poor competence as shown in Table 4.48.

With respect to the frequency of their visits to the web-based course, weblog, and Facebook as shown in Table 4.49, one third of them (30.1%) reported that they visited the web-based course twice a week. Also, it was found that 25.3% visited the web-based course once a week followed by three times a week (20.5%), everyday (10.8%), once a month (7.2%), four times a week (2.4%), five times a week (2.4%), and four times a month (1.2%). When asked about Facebook, most of them (38.6%) reported that posted questions on this social networking site once a week followed by twice a week (16.9%), everyday (13.3%), three times a week (13.3%), once a month (7.2%), five times a week (6.0%), four times a week (1.2%), twice a month (1.2%),

four times a month (1.2%), and five times a month (1.2%). In terms of writing practice on the weblog, most of them (44.6%) reported that they practiced writing once a week, twice a week (15.7%), three times a week (12.1%), everyday (8.4%), once a month (8.4%), four times a week (2.4%), five times a week (2.4%), twice a month (2.4%), six times a week (1.2%), four times a month (1.2%), and eight times a month (1.2%).

Table 4.48: Students' Attitudes toward their English Grammatical Competence and Writing Ability after Learning from the Form-Focused Web-Based Instruction

English Grammatical Competence and Writing Ability	Number	Percentage
Excellent	8	9.6
Very Good	20	24.1
Good	27	32.5
Fair	27	32.5
Poor	1	1.2

Table 4.49: Frequency in Visiting the Web-Based Course, Facebook, and Weblog

Frequency of Accessing the Web-Based Course, Facebook, and Weblog	Number	Percentage
Frequency of Accessing the Web-Based Course		
Everyday	9	10.8
Once a Week	21	25.3
Twice a Week	25	30.1
Three Times a Week	17	20.5
Four Times a Week	2	2.4
Five Times a Week	2	2.4
Once a Month	6	7.2
Four Times a Month	1	1.2
Frequency of Posting Questions on Facebook		
Everyday	11	13.3
Once a Week	32	38.6
Twice a Week	14	16.9
Three Times a Week	11	13.3
Four Times a Week	1	1.2
Five Times a Week	5	6.0
Once a Month	6	7.2
Twice a Month	1	1.2
Four Times a Month	1	1.2
Five Times a Month	1	1.2
Frequency of Accessing the Weblog		
Everyday	7	8.4
Once a Week	37	44.6
Twice a Week	13	15.7
Three Times a Week	10	12.1
Four Times a Week	2	2.4
Five Times a Week	2	2.4
Six Times a Week	1	1.2
Once a Month	7	8.4
Twice a Month	2	2.4
Four Times a Month	1	1.2
Eight Times a Month	1	1.2

Part 2: Effectiveness and Appropriateness of the Form-Focused Web-Based Instruction to Enhance their English Grammatical Competence and Writing Ability

This part reports the students' attitudes toward the effectiveness and appropriateness of the web-based course, the weblog, and Facebook. The students needed to rate the levels of effectiveness ("excellent," "very good," "good," "fair," and "requiring some improvement") and the levels of appropriateness ("absolutely appropriate," "appropriate," "neutral," "inappropriate," and "absolutely inappropriate"). All in all, the results in this part show that the students had positive attitudes toward the effectiveness and appropriateness of the instruction.

As for the web-based course, the average means for the effectiveness and appropriateness were 4.65 and 4.67, respectively. This indicates that the instruction was excellent and absolutely appropriate for them. In more details, it found the average means of 4.57 and 4.66 for the goal and objectives;4.66 and 4.67 for the topic lessons; 4.65 and 4.73 for the grammar lessons; 4.67 and 4.71 for the cloze tests, 4.67 and 4.66 for the error recognition tests;4.66 and 4.67 for video presentations; 4.65 and 4.64 for internal links; 4.65 and 4.67 for external links; 4.69 and 4.66 for links to grammar games; 4.55 and 4.53 for links to writing games; 4.71 and 4.59 for examples of weblog writing; 4.69 and 4.63 for the connection speed of the website; 4.70 and 4.65 for downloading speed; 4.65 and 4.64 for learning time; 4.64 and 4.72 for places available for Internet connection; 4.69 and 4.70 for web applications; and 4.63 and 4.61 for making a contact with the webmaster, respectively. The descriptive data are shown in Table 4.50.

Table 4.50: Effectiveness and Appropriateness of the Web-Based Course

Web-Based Course http://www.noiwebcourse.com	Effectiveness		Appropriateness	
	Mean	SD	Mean	SD
Goal. By the end of the course, students will have developed the abilities to write with grammatically correct sentences in a paragraph level under the assigned topics	4.55	0.61	4.61	0.62
Objective 1. Students will have an overall understanding of the English grammatical features and structure necessary for writing.	4.52	0.57	4.70	0.49
Objective 2. Students will be able to use the English grammatical features and structure to create a paragraph appropriately and accurately.	4.69	0.52	4.69	0.52
Objective 3. Students will be able to write a well-organized and meaningful paragraph under the assigned topics.	4.51	0.63	4.59	0.61

Table 4.50: Effectiveness and Appropriateness of the Web-Based Course (Continued)

Web-Based Course http://www.noiwebcourse.com	Effectiveness		Appropriateness	
	Mean	SD	Mean	SD
Objective 4. Students will be able to identify and correct English grammatical errors.	4.59	0.59	4.70	0.46
Lesson 1. Types of Sports	4.58	0.59	4.65	0.50
Lesson 2 Ethics and Legal in Sports	4.66	0.57	4.69	0.52
Lesson 3. Sports Nutrition	4.65	0.55	4.64	0.55
Lesson 4. Sports Equipment	4.66	0.57	4.61	0.58
Lesson 5. Sports Marketing	4.70	0.51	4.69	0.52
Lesson 6. General Aspects of Sports Science	4.61	0.56	4.70	0.51
Lesson 7. Accidents and Medical Treatment	4.69	0.56	4.65	0.55
Lesson 8. Sports Psychology	4.72	0.53	4.70	0.51
Grammar Lesson 1. Types of Sentences	4.64	0.60	4.70	0.53
Grammar Lesson 2. Determiners	4.60	0.58	4.71	0.53
Grammar Lesson 3. Subject and Verb Agreement	4.64	0.55	4.76	0.43
Grammar Lesson 4. Parts of Speech	4.67	0.54	4.71	0.51
Grammar Lesson 5. Active and Passive Voices	4.65	0.55	4.72	0.48
Grammar Lesson 6. Run-On Sentences and Fragments	4.64	0.53	4.75	0.46
Grammar Lesson 7. Verb Tenses	4.61	0.56	4.77	0.45
Grammar Lesson 8. Word Order	4.75	0.46	4.72	0.50
Cloze 1. Outdoor Sports	4.66	0.55	4.76	0.48
Cloze 2. Ethical Responsibilities of a Coach	4.65	0.50	4.77	0.45
Cloze 3. Carbohydrates	4.69	0.52	4.66	0.50
Cloze 4. Types of Sports Equipment	4.72	0.50	4.73	0.44
Cloze 5. Definition of Sports Marketing	4.72	0.45	4.73	0.47
Cloze 6. Sub disciplines in Sports Science	4.65	0.50	4.70	0.51
Cloze 7. First Aid	4.66	0.55	4.65	0.55
Cloze 8. Psychology and Team Controlling	4.63	0.56	4.64	0.55
Error Recognition 1. Indoor Sports	4.67	0.54	4.65	0.57
Error Recognition 2. Fair Play	4.63	0.58	4.66	0.57
Error Recognition 3. Nutrients	4.64	0.62	4.59	0.64
Error Recognition 4. A Ball	4.65	0.57	4.73	0.54
Error Recognition 5. Jobs in Sports Management	4.69	0.49	4.69	0.52
Error Recognition 6. Four Main Streams in Sports Science	4.72	0.50	4.63	0.60
Error Recognition 7. Body Testing	4.65	0.55	4.67	0.52
Error Recognition 8. Stress of Sportsmen during the Competition	4.70	0.53	4.66	0.57
Video Presentation 1. Types of Sentences	4.73	0.44	4.67	0.47
Video Presentation 2. Determiners	4.63	0.56	4.65	0.55
Video Presentation 3. Subject and Verb Agreement	4.70	0.51	4.73	0.50
Video Presentation 4. Parts of Speech	4.66	0.57	4.69	0.56
Video Presentation 5. Active and Passive Voices	4.65	0.55	4.61	0.60
Video Presentation 6. Run-On Sentences and Fragments	4.65	0.53	4.66	0.57
Video Presentation 7. Verb Tenses	4.64	0.51	4.69	0.49
Video Presentation 8. Word Order	4.63	0.56	4.66	0.50
Internal Links	4.65	0.50	4.64	0.55
External Links	4.65	0.53	4.67	0.52
Links to Grammar Games	4.69	0.54	4.66	0.57
Links to Writing Games	4.55	0.61	4.53	0.63
Examples of Diary Writing	4.71	0.51	4.59	0.59
Speed of the Web-Based Course	4.69	0.54	4.63	0.56
Speed in Downloading Video Presentations	4.70	0.58	4.65	0.61

Table 4.50: Effectiveness and Appropriateness of the Web-Based Course (Continued)

Web-Based Course http://www.noiwebcourse.com	Effectiveness		Appropriateness	
	Mean	SD	Mean	SD
Time for Learning with the Web-Based Course	4.65	0.57	4.64	0.55
Places for Making an Internet Connection	4.64	0.58	4.72	0.53
Web Applications: Colors, Graphics, and Pictures of the Web-Based Course	4.69	0.54	4.70	0.51
Making a Contact with the Webmaster	4.63	0.56	4.61	0.60

Like the results mentioned in the preceding section, the students also had positive attitudes toward the effectiveness and appropriateness of the weblog with the average means of 4.70 and 4.69. This suggests that learning on the weblog was excellent and absolutely appropriate for them. They thought that speed of the weblog (Mean = 4.76; SD = 0.51) was the most effective feature of the blogger while clicking on the "Send" button (Mean = 4.77; SD = 0.50) was the most appropriate feature. The descriptive data of the effectiveness and appropriateness of the weblog are shown in Table 4.51.

Table 4.51: Effectiveness and Appropriateness of the Weblog

Weblog http://noidiary2010.blogspot.com	Effectiveness		Appropriateness	
	Mean	SD	Mean	SD
Speed of the Weblog	4.76	0.51	4.71	0.57
Typing Codes and Italic Letters	4.60	0.56	4.60	0.60
Clicking on the "Send" Button	4.70	0.51	4.77	0.50
Convenience in Viewing Your Own Writing Work	4.72	0.48	4.72	0.48
Convenience in Viewing Your Peers' Writing Work	4.71	0.53	4.71	0.51
Suggestions and Correction of Your Writing Work	4.70	0.51	4.69	0.49
Time Taken Before Getting Answers and Suggestions	4.73	0.47	4.67	0.54
Size and Clearness of Typing Letters	4.72	0.48	4.66	0.50
Colors, Graphics, and Formations of Weblog	4.65	0.53	4.66	0.52
Time For Learning through Weblog	4.69	0.49	4.67	0.54
Places Available for Learning through Weblog	4.70	0.53	4.73	0.54

Not only were the students satisfied with the web-based course and the weblog, but they also had positive attitudes toward the effectiveness and appropriateness of using Facebook as means to discuss about their English grammatical competence and writing ability. The average means of Facebook were 4.72 for its effectiveness and 4.71 for its appropriateness. This indicates that learning on Facebook was excellent and absolutely appropriate for them. They thought that chatting on Facebook (Mean = 4.77; SD = 0.42) was the most effective feature while colors, graphics, games, and

web formations (Mean = 4.78; SD = 0.41) were the most appropriate feature. The descriptive data of the effectiveness and appropriateness of Facebook are shown in Table 4.52.

Table 4.52: Effectiveness and Appropriateness of Facebook

Facebook	Effectiveness		Appropriateness	
	Mean	SD	Mean	SD
Speed of Facebook	4.76	0.51	4.67	0.54
Making Connection with People	4.70	0.49	4.69	0.52
Chatting	4.77	0.42	4.73	0.47
Posting	4.76	0.51	4.69	0.52
Receiving Answers and Suggestions	4.69	0.56	4.72	0.48
Answers and Suggestions Received	4.72	0.48	4.67	0.52
Time Taken Before Getting Answers and Suggestions	4.70	0.51	4.70	0.49
Uploading Files	4.71	0.53	4.69	0.52
Downloading Files	4.69	0.58	4.69	0.52
Colors, Graphics, Games, and Formations	4.73	0.52	4.78	0.41
Time for Using Facebook	4.67	0.52	4.75	0.49
Places Available for Using Facebook	4.70	0.58	4.72	0.50

Part 3: Students' Attitudes toward their English Grammatical Competence and Writing Ability after Receiving the Treatment from the Form-Focused Web-Based Instruction

This part reports the attitudes of students toward their English grammatical competence and writing ability after receiving the treatment from the form-focused web-based instruction. They needed to rate the levels of competence, such as much better, somewhat better, about the same, somewhat worse, and much worse. All in all, it was found that they had positive attitudes toward their competence after receiving the treatment.

Overall, they had positive attitudes toward their English grammatical competence with the average mean of 4.59. This indicates that based on the students' thoughts, their grammatical competence was much better. The students thought that they had good competence at determiners and articles most (Mean = 4.69; SD = 0.58), followed by parts of speech like adverbs (Mean = 4.66; SD = 0.59), adjectives (Mean = 4.65; SD = 0.61), nouns (Mean = 4.64; SD = 0.60), verbs (Mean = 4.63; SD = 0.64), and verb tenses (Mean = 4.61; SD = 0.68). The descriptive data of their English grammatical competence are shown in Table 4.53.

Table 4.53: Students' English Grammatical Competence after Receiving the Treatment

English Grammatical Features and Structure	Mean	SD
Determiners and Articles	4.69	0.58
Pronouns	4.58	0.61
Adverbs	4.66	0.59
Adjectives	4.65	0.61
Nouns	4.64	0.60
Verbs (modal verbs, auxiliary verbs, verbs)	4.63	0.64
Verb Tenses	4.61	0.68
Word Order	4.57	0.70
Subject-Verb Agreements	4.49	0.76
Active and Passive Voices	4.49	0.76
Types of Sentences (simple, compound, and complex sentences) and Clauses (dependent clauses and independent clauses)	4.55	0.69
Run-on Sentences and Fragments	4.52	0.69

With respect to their English writing ability, it was found that the students had positive attitudes with the average mean of 4.55. This suggests that based on the students' thoughts, their writing competence was much better. After the treatment, they thought that they could understand the roles of sentences and purposes of pieces of writing most (Mean = 4.60; SD = 0.68). The descriptive data of their English writing ability are shown in Table 4.54.

Table 4.54: Students' English Writing Ability after Receiving the Treatment

Writing Ability	Mean	SD
Choose appropriate words to create sentences and paragraphs more correctly, appropriately, and easily.	4.59	0.68
Use various grammatical items and sentence structure.	4.49	0.74
Write Meaningful Sentences	4.54	0.74
Arrange sentences to create a meaningful paragraph.	4.54	0.77
Understand the roles of sentences and purposes of pieces of writing	4.60	0.68
Check and correct your own writing errors.	4.52	0.72
Reduce Grammatical Errors and other Writing Erroneous Elements in Your Writing	4.59	0.70
Feel confident in your own writing abilities and be able to add, omit, replace or combine words, phrases, clauses and sentences in a paragraph correctly and appropriately.	4.55	0.69

Part 4: Suggestions and Expectations about the Future Development of the Web-Based Course

From the questionnaire results, there were twenty-three participants who gave suggestions and expectations about the future development of the web-based course. Seven participants reported that the form-focused web-based instruction was useful and gave them convenience to practice English writing:

"Language learning website is a good choice for learning because it provides convenience and has a big source of information. The website helps me learn more about the English language, develops my grammatical knowledge, and know more about new English vocabulary. Students should have more opportunities to practice English writing skills. It is very useful for them. I want to have such a good website forever so that students' English language will be much better."

Other participants suggested that there should be websites that taught English speaking skills and conversations; basic English language; English language from movies, songs, and animations; official terminology and vocabulary in their sports science field; translations; and teaching just only one by one.

As pointed out by the results gained from the questionnaire, it can be said that the students had positive attitudes toward the effectiveness and appropriateness of the web-based course, the weblog, and Facebook. They were also satisfied with their English grammatical competence and writing ability. All of these are evidence to prove that the form-focused web-based instruction was effective for enhancing their English grammatical competence and writing ability.

4.4.2 Interview Protocol

The interview was conducted to gain in-depth information to support the data gathered from the questionnaire. The interviewees were 13 volunteering first-year sports science students. In this study, the semi-structured interview was employed in order to gain the information as it was expected as well as some other related information necessary to promote the effectiveness of the form-focused web-based instruction. The purpose of the interview was to find out the attitudes of sports science students toward the effectiveness of the form-focused web-based instruction to enhance their English grammatical competence and writing ability. The findings report the students' attitudes toward the enhancement of their English grammatical competence and writing ability; the effectiveness of the web-based course; the effectiveness of using the weblog as a means to practice English writing; and the effectiveness of Facebook used as a pathway for discussions about their problems in English grammatical competence and writing ability.

1. Enhancement of the Students' English Grammatical Competence and Writing Ability

This part reports the students' attitudes toward the enhancement of their English grammatical competence and writing ability after receiving the treatment from the form-focused web-based instruction. Overall, it was found that the interviewees had positive attitudes toward their competence. Based on the interview responses, nine interviewees reported that they could practice writing and know what is right or wrong from the teacher's feedback on the weblog:

> *"It is easy for us to exchange thoughts with teacher on Facebook. I learn more about English grammar. I know what is right or wrong after we get the teacher's feedback on our pieces of writing on the weblog. I learn how to arrange words in the right order from the website. It is convenient for us because we do not have to meet the teacher but we can study on the Internet. As a result, my English grammar and writing get improved"*

Other interviewees reported that their grammatical competence and writing ability were better because they could review the lessons on the website before the exams. They knew how to use English grammatical features to create sentences from examples provided on the website. They also advocated that the instruction was good but the students themselves needed to visit the website regularly:

1. Effectiveness of the Web-Based Course

This part reports the goal and course objectives, grammar lessons, cloze tests and error recognition tests, video presentations, grammar games, writing games, examples of writing, connection speed, file downloading, internal and external links, and web applications, such as colors, graphics, pictures, and web organization. All in all, the interviewees had positive attitudes toward the web-based course. With respect to the goal and course objectives, nine interviewees reported that the goal and objectives of the instruction were related to what they learned in the English class:

> *"The stated goal and objectives of the instruction are related to what we learn in the English class. All of these are the outcomes that we need to reach in the English class."*

Other interviewees reported that the goal and objectives of the instruction were appropriate because they focused on writing which was also emphasized in their English class.

As for the lessons, ten interviewees reported that the lessons were appropriate and effective because not only they could learn English grammar, they could improve their writing skills:

> *"We learn how to use English grammatical features clearer than before. We learn how to use them correctly. It is better to use contents from our subject matters as the context for study because they are what we are familiar with and find everyday. Learning from these lessons can help us understand the principles of grammar rules and usage. We can use them to direct the way we write."*

Apart from this, three interviewees reported that they were appropriate and effective because the lessons were related to what they learned in the classrooms:

> *"It helps me a lot. I can improve not only knowledge in my subject matters but also the English language. The lessons are related to what I am learning in my subject matters and the English class."*

As for the cloze and error recognition tests, six interviewees reported that cloze tests were useful, but error recognition tests were more useful:

> *"Cloze tests are useful for learning grammar, but I think error recognition tests are more useful. We learn how to focus on the mistakes and errors we can see in written texts. When we do an error recognition test if we fill in the wrong answer, there will be the right answer beside the wrong one. So we know what is right or wrong. Apart from this, error recognition tests help us learn word meanings from surrounding words. All of these characteristics contribute to the enhancement of our writing abilities"*

Other interviewees reported that these two types of tests were effective for them because they usually found them in their traditional classroom. They liked both cloze and error recognition tests because they could practice reading and writing at the same time. They could learn the contents in their subject matters at the same time from these tests. Especially for cloze tests, one of them reported that he preferred cloze tests more than error recognition tests because when he had to correct some words or phrases, it was hard for him to make the right answers.

As for video presentations, eight interviewees reported that learning from video presentations were more interesting than reading the lessons by themselves:

> *"When we study the lessons by reading, we cannot understand them. It is more interesting to learn from the videos. In the books, we can see words and words without sounds. From the videos, we can hear the teacher's voice explaining how to*

use English grammar. There are also some pictures that make us feel relaxed when

learning. I think learning from the videos makes the lessons easy to understand."

Other interviewees advocated that it was convenient because they can review the lessons more than once. Moreover, it was good to review the lessons before they took the exams by watching the video presentations. The videos made them memorize the lessons easily.

In terms of grammar and writing games, seven interviewees said that it was fun studying English grammar and writing from games:

"The games are effective for our learning. They make us feel interested in using

English grammar and writing. It is not only us but the games are open for other

Internet users. The games are fun and easy to understand. Because we learn with

happiness, we can understand the lessons better."

Other interviewees reported that games made them want to learn English grammar and writing. The games made them feel relaxed in learning English. In addition, they said they could learn new lists of vocabulary necessary for writing from the games.

As for the examples of writing provided in the web-based course, seven interviewees reported that they could see various types of English sentence structure and learn how to write correctly:

"The examples help use a lot. I can see a variety of sentences. They are beneficial for

use because we can apply to use in our classroom. If we write more frequently, we

will be able to write better and more correctly."

Other interviewees reported that the examples made them dare to write more. In addition, they reported that could apply the examples to use in their pieces of writing.

With respect to the speed of the web in general and downloading files, six interviewees reported that the web speed was in the average level. It was not too slow or fast:

"I am satisfied with it. It is not too fast. It is not too slow. Its speed is in the average

level. We do not need to wait for a long time. I feel okay with it."

Other interviewees reported that the web speed was fast and easy to download files, like videos. Some of them reported that the web speed was fast but sometimes it was slow. However, they said that the web speed also depended on the place they made the Internet connection.

As for the internal and external links, like to Facebook and weblog, eight interviewees reported that the speed of internal and external links was fast for them:

> *"After I click on the buttons linked to other web pages or external websites, they can easily be open. I do not have problems with this."*

Other interviewees pointed out that the speed of internal and external links depended on the location where the Internet connection was available. Moreover, some of them reported that the speed of internal and external links was not too fast and not too slow.

In terms of the web applications, like colors, graphics, pictures, and web organization, all of the interviewees reported that the colors, graphics, pictures, and web organization were good for their eyesight:

> *"It is appropriate for us. It is not too colorful. It does not cause a big headache. It is good for eyesight."*

2. *Effectiveness of Using the Weblog as a Means for Writing Practice*

This part reports the attitudes of the students toward the effectiveness of the weblog in terms of how it helped them improve English writing. The interviewees were also asked about the characteristics of the weblog, like connection speed, typing codes before sending work, viewing their own pieces of writing as well as those of others, sizes and clearness of letters, colors, graphics, and web organization whether they were appropriate for them. They were asked about their satisfaction with the given suggestions, correction, and the period of time you had to wait before receiving the feedback from the weblog as well.

In general, it was found that the interviewees preferred to write on the weblog. Five interviewees reported that when they made writing errors, it was easy to get feedback from the teacher:

> *"It helps us a lot because it is easy to practice writing on the weblog. We can practice ourselves more and more. We can learn and know what is right or wrong because there is a teacher who can give feedback. We can get useful suggestions and comments about how to make English sentences. We can learn more about English grammar after we practice writing on the weblog."*

Also, three interviewees reported that they knew their weaknesses in writing and how to solve them:

> *"I think there is no one on earth who can write without any mistakes at the first time he starts writing. We need to learn from mistakes first and use them to solve our*

weaknesses. Because the mistakes come from us, we can remember them easily. We will be more careful in writing."

Other interviewees reported that they could learn English grammar rules more on the weblog. The weblog was a choice for writing practice and it was like having their personal tutor when they wrote on the weblog. Some of them also reported that they were afraid that they would make some errors when they was assigned to write anything in English, but with the weblog, they dared to write more than before.

With respect to the characteristics of the weblog, connection speed, typing codes before sending work, viewing your own pieces of writing as well as those of others, sizes and clearness of letters, colors, graphics, and web organization, eleven interviewees reported that they were satisfied with these weblog's applications. They were in the standard level. Some of them reported that the applications were appropriate for them and the letters have suitable sizes. They were not too big and not too small.

In terms of the given suggestions, correction, and the period of time they had to wait before receiving the feedback from the weblog, twelve interviewees reported that the suggestions they got were clear to understand. Apart from this, they did not have to wait for a long time for the feedback:

"It is good for me. I do not have to wait for a long time. I can get feedback about my piece of writing within one week.I think I learn a lot from the weblog. I know what is right or wrong. The teacher always comes and corrects our mistakes on the weblog. The teacher tells us directly about our mistakes. The suggestions are clear to understand. We can apply what we learn from the weblog to use in our pieces of writing."

Moreover, one interviewee reported that getting the suggestions in English helped her improve her English language:

"The suggestions are in the satisfying level. We can get suggestions in English. I think this is good for me improve my English writing."

4. Effectiveness of Facebook Used as a Pathway for Discussions about the Students' Problems in English Grammatical Competence and Writing Ability

This part reports the students' attitudes toward the effectiveness of Facebook which was used as a means for discussions, the appropriateness of the web applications, the suggestions and responses they received from Facebook as well as the period of time they needed to wait. It was found that the interviewees had positive

attitudes toward using Facebook as a means for discussions about their English grammatical competence and writing ability. Four interviewees reported that it was convenient because they used Facebook everyday:

"I think it is easy to discuss with the teacher on Facebook because we use it everyday. It is convenient to make connections with people on Facebook."

Another four interviewees reported that Facebook was an up-to-date tool for learning because many people worldwide use it to get in touch with each other:

"For me, learning a language through Facebook is an up-to-date learning style. It is up-to-date because people from many different regions choose Facebook as a medium for communication. I can discuss with the teacher easily on Facebook."

Apart from this, the other interviewees reported that Facebook gave them convenience because it was like they had their personal tutor at home. They did not have to travel, but they could discuss with the teacher at home. Moreover, not only the teacher and their friends whom they could discuss with, but they could also discuss with other Facebook users. They advocated that Facebook was also another choice for learning in case that the website caught a computer virus, they could contact with the teacher on Facebook.

When asked about the convenience in discussions, one interviewee reported that she could have discussions with the teacher easily on Facebook. If she did not call the teacher on phone, she chose Facebook as a tool for discussions about her learning problems:

"I can ask the teacher for anything I do not understand. I usually get clear explanations. Sometimes I call the teacher online. When the line is busy, I choose to discuss with her on Facebook. I can use Facebook almost all the time. When I do not understand some lessons, I can post my questions on Facebook."

Moreover, one interviewee pointed out that he got more opportunities to ask and discuss with the teacher about his learning problems on Facebook:

"It is very good for me. It helps me a lot. Facebook gives me more opportunities to practice my writing skills before taking the exams. Because I have practiced my writing beforehand, it will be easier for me to do the exams."

As for the characteristics of Facebook, like connection speed, making a contact to other people by chatting, posting comments, uploading and downloading files, all of the interviewees reported that Facebook applications were effective and contributed to the enhancement of their grammatical competence and writing ability:

"For me, Facebook has a reliable system. I can download anything I want. It has useful applications that contribute to language learning. I can chat about my learning problems with the teacher through Facebook."

They also pointed out that it was faster to have discussions with the teacher using Facebook:

"When I want a quick answer, I can easily get answers within a short time. Even though at that moment the teacher may not be online, I can still get my answer from other Facebook users. I think Facebook is a Web 2.0 technology which was developed for people in many different regions to make contact with each other."

With respect to the given suggestions and responses they received from Facebook as well as the period of time they needed to wait before getting the feedback, all of them said that the suggestions and responses were clear for them. Eight interviewees said that they could get the answers within a short time from the teacher. Meanwhile, five interviewees reported that sometimes it was a little longer for them to receive the feedback from the teacher, but it was still acceptable because they knew that it was impossible for the teacher to be online all the time. They solved this problem by leaving the message or chatting with some native English speakers.

According to the interview results, it can be said that the students were satisfied with the form-focused web-based instruction. Not only did they learn the contents and language, but the course also gave them convenience to study. It seems that the course met the needs of the students. The lessons were related to what they had learned in their traditional class. They could review the lessons on the website before they took the exams. They did not have to travel, but they could study at home. As for the teaching styles, they reported that they could learn how to use English grammatical features to create a meaningful paragraph. They knew more about the relationship of words in the sentence. These are some of the advantages the students reported that they got from the course.

4.5 Summary Report of the Findings

To design, implement, and find out the effectiveness of the form-focused web-based instruction, both quantitative and qualitative data were gathered using various types of research instruments, such as sets of questionnaire, interview protocol, pre-

test, post-test, weblog, Facebook, and the web-based course itself. The findings of the study are summarized below:

Research Question 1: What were the needs of Thai undergraduate sports science students and their stakeholders? The answers to this research question are summarized as follow:

1. The students, English teaching staff, and people who worked in the fields of sports science devoted importance to writing ability as equal as other language skills. This is because English writing was a required skill based on the English curriculum for first-year undergraduate students at Mahidol University. Moreover, after graduation, the people in sports science fields reported that the students needed to use writing skills in their professions, such as writing an exercise or a sport program, etc.

2. Form-focused instruction is a type of teaching which pays an emphasis on linguistic forms, and it allows the teacher to choose either spontaneous or predetermined ways (Spada, 1997). In the present study, the linguistic form emphasized was the English grammar. Based on the needs analysis results, it was found that both of the students and the English teaching staff believed that English grammatical competence had a great effect on the students' writing ability. They pointed out that the grammatical features and structure, such as word order, types of sentences, run-on sentences and fragments, determiners and articles, subject-verb agreement, active and passive voices, verb tenses, and parts of speech were important for writing ability. These two groups of participants also reported that students should be given more opportunities to study English grammar from context. The students agreed that with the availability of context, they could learn both content matters and the English language at the same time. The English teaching staff agreed that context encouraged students to use knowledge they learned to apply for use in their writing. As for the content matters that should be developed as the context for teaching grammar, it was found that both the students and the people who worked in sports science devoted importance to the contents about first aid and rehabilitation, sports injuries, and some other topics concerning with body and health.

3. From the needs analysis results, it seems that web-based instruction was advantageous to students. The participants reported that web-based instruction allowed students to study from various types of media. It could reduce gaps of time and

distance. Students could review the lessons on the website more than once. However, based on the points of view of the students and the English teaching staff, the web-based instruction also had disadvantages because students themselves needed to control their learning. There was nobody on the web who could force them to study, but they needed to study on their own. Moreover, when they had problems in language learning, they could not ask the teacher directly. To solve this problem, the participants suggested that students should be given more chances to discuss with the teacher through Facebook.

4. The participants suggested that the time should not be restricted. Students should be given feedback within a short time. There should be online technologies used accompanying with the web-based course like Facebook. They suggested that there should be some games or video presentations presented on the website so that students would not feel bored.

Research Question 2: How could the form-focused web-based instruction be developed?

The course was developed based on the framework of language course development of Graves (2000) and the needs analysis results. On the left side of the webpage www.noiwebcourse.com, there were eight topics in sports science available for students to click on. All of the topics were used as context to teach English grammar and structures. English grammar and structures were embedded in the content areas in sports science based on the needs analysis results that the content areas derived from students' interests. It was believed that when using the content areas students were familiar with or interested in, the lessons could help students memorize rules and write better. This is because they were what the students had sufficient background information. Meanwhile, Facebook and weblog were added in the course in order to promote social interaction between the teacher and students as well as among the students themselves. The needs analysis results indicated that Facebook enhanced the interaction between the teacher and students. Students could ask questions directly, discuss, negotiate, and share thoughts with the teacher and other friends on Facebook. As for weblog, it was added in the present study because it could serve as a free online space for students to practice writing. As could be seen in

the needs analysis results, some students reported that the weblog could reduce their embarrassment when they made writing mistakes.

Research Question 3: What were the effects of the form-focused web-based instruction on the sports science students' English grammatical competence and writing ability?

1. Grammatical Competence

Based on the worksheets printed out from the web-based course, there were statistically significant differences of the mean scores of both the cloze tests ($F = 33.142$; $p = .000$) and the error recognition tests ($F = 52.66$; $p = .000$). Apart from this, the students also gained higher scores in the cloze and error recognition tests of the post-test at significant levels. There were statistically significant differences of the mean scores in the cloze tests ($t = 6.64$; $p = .000$) and error recognition tests ($t = 5.00$; $p = .000$). This indicates that the students made progress and had achievement in their English grammatical competence.

2. Writing Ability

The score data from the writing assignments on the weblog showed a statistically significant difference ($F = 10.355$; $p = .000$). From the first to the last pieces of writing on the weblog, the students' writing errors also decreased from 421, to 228 and to 190 errors. Apart from this, the students gained higher scores in the post-test. ($t = 2.98$; $p = .004$). The number of word errors dramatically decreased from 615 words found in the pre-test to 371 words in the post-test as well. This suggests that the students made progress and had achievement in their English writing ability.

Research Question 4: What were the attitudes of sports science students toward the form-focused web-based instruction?
According to the results of the questionnaire and the interview, it can be said that the students had positive attitudes toward the form-focused web-based instruction. From the questionnaire results, the students showed positive attitudes toward the effectiveness (Mean = 4.65) and appropriateness (Mean = 4.67) of the form-focused web-based instruction. Apart from this, they also had positive attitudes toward the weblog and Facebook. They had positive attitudes toward their English grammatical competence and writing ability with the average means of 4.59 and 4.55, respectively. They reported that after the treatment, they could understand the roles of sentences and

purposes of pieces of writing. They also reported that form-focused web-based instruction was useful and gave them convenience to practice English writing. Not only did they learn English grammar and writing, but they also could learn new vocabulary from doing the cloze tests on the web-based course. As for the weblog, they pointed out it was easy to get feedback on this free online space. They could learn what was right or wrong from practicing English writing on the weblog. With respect to Facebook, they reported that this social networking site provided them more opportunities to discuss with the teacher, their friends or even other Internet users. Facebook could play the role as their personal tutor since they could chat and ask the teacher for some explanations on Facebook at their most convenience.

CHAPTER V
SUMMARY OF THE RESULTS, DISCUSSION,
AND RECOMMENDATIONS

This final chapter comprises the summary of the results, discussion, and recommendations for future studies. It shows the overall picture of the experiment and the results in brief as well as practical and theoretical justifications based on the outcomes of form-focused web-based instruction. It elaborates how form-focused web-based instruction can enhance English grammatical competence and writing ability of Thai undergraduate sports science students as well.

5.1 Summary of the Results

Even though both web-based instruction and form-focused instruction seem to be useful for language teaching, there were relatively rare studies that investigated their effectiveness on the enhancement of English grammatical competence and writing ability. Because of this reason, the present study aimed at developing and finding out whether form-focused web-based instruction could enhance English grammatical competence and writing ability of Thai undergraduate sports science students. The study investigated the students' attitudes toward this learning tool as well. After the course implementation, it was found that the target students made improvement in English grammatical competence and writing ability at a significant level. Both qualitative and quantitative data revealed that grammatical knowledge had a great effect on their English writing ability. Especially, when the students were taught through explicit form-focused instruction, they understood English grammatical features and structures more clearly. This approach aided them in making comprehension about roles of sentences in a paragraph. Concerning web-based instruction, the technologies, namely Facebook, weblog, and web-based course were considered helpful for students to study these language skills. These technologies act like scaffolding motivating and helping students learn English grammar and writing skills. Given here is the effectiveness of the mixture of explicit form-focused instruction and web-based instruction, and it can be said that such a successful outcome cannot be reached at all without a well-organized research procedure as done

in this study. The whole procedure comprised three phases: needs analysis, course development, and determination of the effectiveness of form-focused web-based instruction. A summary of each phase as well as its findings is provided below.

5.1.1 Needs of Thai Undergraduate Sports Science Students and their Stakeholders

A needs analysis was conducted to determine types of English grammatical features and themes in sports science that should be included in form-focused web-based instruction. The data in this phase were collected from 83 first-year undergraduate sports science students, 47 people who worked in the fields of sports science, and nine English teaching staff. The research instruments were questionnaires and interview questions. The data were analyzed by the SPSS Program and content analysis. The questionnaire for the students' group consisted of five parts: demographic characteristics, English grammatical features and structures necessary for the development of writing ability, topic areas necessary for their academic areas of study, necessity of form-focused web-based instruction, and suggestions for the development of the web-based course. The questionnaire for the people who worked in the fields of sports science included four parts: demographic characteristics, types of writing found in everyday lives and professions in sports science, topic areas in sports science, and suggestions for the development of English instruction, especially for undergraduate sports science students. As for the English teaching staff, the questionnaire in this group contained six parts: demographic characteristics, tendency in developing the English curriculum, English grammatical features and structures necessary for writing ability, writing errors in English grammatical features and structures found in the students' pieces of writing, effects of form-focused instruction and web-based instruction toward the enhancement of English grammatical competence and writing ability, and suggestions and expectations regarding the web-based course. After the questionnaires were collected and analyzed, thirteen students, six people who worked in the fields of sports science, and nine English teaching staff were interviewed in order to gain insightful information about their needs in some English grammatical features and structures, topics of writing, levels of writing, contents matters in sports science, and the concepts of form-focused instruction and

web-based instruction as perceived by the participants. The results of the needs analysis could be summarized as follows:

1. Most of the participants thought that parts of speech, verb tenses, articles and determiners, passive voice and active voice, types of sentences, subject-verb agreements, and run-on sentences and fragments seemed to be the most important English grammatical features and structures which affected students' writing ability.

2. The level of writing that was regarded necessary for them was paragraph writing.

3. The topics of writing should be concerned with their own biographies or anything related to their personal lives.

4. Sports science students and people who worked in this field thought that first aids and resuscitation and general aspects of sports science were the most important content areas both in their daily life and occupations.

5. Both the students and the English teaching staff thought that grammatical competence helped them use English accurately.

6. As for grammatical errors, the teaching staff claimed that they found problems of wrong or missing articles, determiners, and verb tenses more frequently than other grammatical errors.

7. The students mentioned that with context available in form-focused instruction, they could have more opportunities to study both academic areas of their study and the language.

8. Regarding web-based instruction, the students thought that the Internet technology gave them more opportunities to learn writing from various media types, such as videos, slideshows, and many other types of multimedia.

9. Students reported that they should be given one semester for studying from the web-based course.

5.1.2 Development of the Form-Focused Web-Based Instruction

The present course was developed using the framework of the course development proposed by Graves (2000). The teaching approaches, namely form-focused instruction and web-based instruction were employed based on the beliefs of their advantages to language learning. This was derived from the needs analysis results showing that form-focused instruction not only gave students more opportunities to learn both subject matters and the English language but also enhanced the abilities to

apply what they had learned to use in their own pieces of writing. In terms of web-based instruction (web-based course, Facebook, and weblog), it was believed that these technologies provided students a chance to learn writing from various media, developed a learning network, saved time, and reduced travel expenses.

As for the course content, the grammatical features and structures chosen were types of sentences, determiners and articles, subject-verb agreements, parts of speech, active and passive voice, run-on sentences and fragments, word order, and verb tenses. All of them were considered as the most important items for enhancing the students' writing ability based on the needs analysis results. These grammatical features and structures were taught via eight topics in sports science, such as types of sports, ethics and legal issues in sports, sports nutrition, sports equipment, sports marketing, general aspects of sports science, sports psychology, and accidents and medical treatment. Each topic included video presentations, grammar lessons, cloze tests, and error recognition tests. The students' improvements in English grammar and writing were determined by the results of formative and summative assessment. The formative assessment included the worksheets of cloze and error recognition tests printed out from the web-based course and the students' pieces of writing on the weblog. The summative assessment included the pre-test and post-test. In addition, to find out levels of their satisfaction to form-focused web-based instruction, their opinions toward the course were investigated.

As is seen in this section, both formative and summative assessment was used to evaluate the effectiveness of the course. In more details, the following section shows how form-focused web-based instruction effectively enhanced English grammatical competence and writing ability.

5.1.3 Effectiveness of Form-Focused Web-Based Instruction on the Sports Science Students' English Grammatical Competence and Writing Ability

The results of the study show statistically significant differences of the average mean scores of the pre-test and post-test (t = 6.07, p =.000) for the total score, (t = 6.55, p = .000) for the grammar part, and (t = 2.98, p = .004) for the writing part. Moreover, it was found that the number of word errors was reduced from 615 words found in the pre-test to 371 words in the post-test. In addition to this, there were not errors of passive and active voice, run-on sentences, present perfect tense, present

simple tense, and past simple tense in the post-test. With respect to cut-off scores, the students got 74% on the post-test which was higher than the pre-test which they got 61% only. As for the results gained from the weblog, it was found that the students made progress in their writing at the significant level (F = 10.355, p = .000). The number of word errors dramatically decreased from 421words found in the first pieces of writing to 228 words in the second pieces, and 190 words in the third pieces. There were no errors of using incorrect parts of speech, plural "s" ending, possessive adjectives, word forms, word order, and using "any" and "some." As evidence to support their progress, there were statistically significant differences of the mean scores of the cloze tests (F = 33.142, p = .000) and the error recognition tests (F = 52.66, p = .000).

According to these summative and progressive assessments, it can be concluded that the student's grammatical competence and writing ability were enhanced after studying from the form-focused web-based instruction.

5.1.4 Attitudes of Sports Science Students toward the Form-Focused Web-Based Instruction

The attitudes of sports science students toward form-focused web-based instruction in enhancing their grammatical competence and writing ability were investigated using the attitude questionnaire and the semi-structured interview. Due to the results of the questionnaire, the students claimed that form-focused web-based instruction which comprised a web-based course, weblog, and Facebook had several effective and appropriate characteristics for the enhancement of their grammatical competence and writing ability. Most of the students thought that after they received form-focused instruction transmitted through the web-based course, they could understand the roles of sentences and purposes of writing pieces (Mean = 4.60, SD = 0.68). In terms of their grammatical competence, they rated determiners and articles as the grammatical features that they thought they learned most after the treatment (Mean = 4.69, SD = 0.58).

As for the interview results, all of the interviewees claimed that form-focused web-based instruction effectively enhanced their grammatical competence and writing ability. They stated that with context available in this type of instruction, they clearly understood how to use English grammar in more details. The teaching provided good

examples and new techniques about how to use grammatical features in their writing. They were also able to review lessons many times on the website to enhance their comprehension. As for the weblog, they claimed that it gave them more opportunities to practice writing anytime as they desired. They got comments and suggestions easily from the teacher and their peers on the weblog. With respect to Facebook, the interviewees said that they could not only ask, discuss, and contact with the teacher or even other users, but they could also download, upload, or even post questions about their learning problems on this social networking tool.

In brief, according to the results of the pre-test and post-test, the questionnaire and interview responses as well as the progress of their writing found from the weblog, it can be said that the form-focused web-based instruction was effective to enhance grammatical competence and writing ability of undergraduate sports science students.

5.2 Discussion of the Findings

Discussion of the present findings consists of three parts: needs analysis results, effectiveness of the instruction, and the students' attitudes toward the instruction.

5.2.1 Needs Analysis Results

The needs analysis results in this study included types of grammatical features and structures and content matters in sports science that the participants regarded as most important. The chosen ones were used for developing the form-focused web-based instruction.

The results of the study indicated that word order and sentence structures (types of sentences and fragment and run-on), verb tenses, and parts of speech (nouns, verbs, adjectives, etc.) seemed to be the most important grammatical features and structures. Concerning the importance of these linguistic features, as cited by many scholars, these grammatical features and structures are important for non-native English speaking students (Connolly, 1991; Newman et al., 2010; Saunders and Scialfa, 2003). Newman et al. (2010) point out that both word order and parts of speech are important linguistic knowledge. The order of words can affect the meaning of sentences and convey grammatical information. Parts of speech are sentence

elements, while word order or the syntactic constituent order is directly concerned with the order of subject, verb, and object; the order of modifiers (adjectives, adjuncts, demonstratives, numerals, and possessives) in a noun phrase; and the order of adverbials (adverbs, adverbial phrases, and adverbial clauses) (Connolly, 1991). This means that to study word order, students need to know about parts of speech. Referring to sentence structure, it has been mentioned as an important part in effective writing since it is one of the additional criteria which are essential for the development of academic writing skills (Saunders and Scialfa, 2003). Moreover, accuracy in sentence structure is also an important part of writing because it is concerned with the abilities to develop various types of sentences (Catanach and Golen, 1996; Gee, 1972; Goldberg, Roswell, and Michaels, 1996; Huddleston, 1954; Lynch and Golen, 1992; Robertson, 1986; Saunders and Scialfa, 2003; Strand, 1997; Tindal and Parker, 1991; Winter, Neal, and Warner, 1996). As for verb tenses, it is believed that these grammatical features are difficult for many Thai learners. This is because there is no use of verb tenses in Thai. The Thai language does not require verb inflections or auxiliaries to show the time concepts as the English language does. Its time reference is generally shown in context or the use of time adverbials (Noochoochai, 1978). Therefore, it is not impossible if Thai EFL students overgeneralize the "-ed" ending.

Other than the above claims, previous studies have revealed that grammatical features and structures, like word order, parts of speech (especially verb forms), and verb tenses are worth teaching since they mostly account for the highest frequency of errors found in compositions of EFL students. For instance, Al-Khresheh (2010) reported that word order accounted for more than half of the errors found in compositions and such errors were the results of the students' L1 influence. Wee, Sim and Jusoff (2010) found that non-native English students had the highest frequency of errors in the use of third person singular verbs, like "-s," "-es," "-ies." Bhatia (1974) found that verb forms and tense sequence accounted for the highest frequency of errors. In case of Thai EFL students, Vongthieres (1974) found that advanced students had the highest frequency of errors in verb usages. Most importantly, among subdivisions of verbs, verb tenses accounted for the highest frequency of errors. Similar to this, Krairussamee (1982) found that verb tenses and verb forms had the

highest frequency of errors. Such findings have led to a conclusion that verb tenses are linguistic elements that Thai EFL students need to learn.

Based on the beliefs of many scholars, the results evidenced by the previous studies, and those of the present study, grammatical features and structures, like word order, parts of speech, and verb tenses are important for the development of English writing ability. The order of words in the sentence can affect the meanings. Parts of speech are sentence elements that must be arranged in the right order. Meanwhile, verb tenses do not exist in the Thai language and as a result, misunderstanding in their usage can lead to overgeneralization. Furthermore, according to the previous research, these grammatical features and structures also accounted for the highest frequency of writing errors. In this regard, the present study included these grammatical features and structures in the course.

With respect to content matters in sports science, it was found that first aid and resuscitation and general aspects of sports science seemed to interest students and should be included in the web-based course. Based on this piece of evidence, the researcher decided to use them as the context for teaching English grammar and writing accompanying the other six content areas, which were sports nutrition, ethics and legal in sports, types of sports, sports psychology, sports equipment, and sports marketing. These topics were derived from the students' needs. It is also accepted that the lessons developed from intrinsic interests can increase the students' positive learning motivation (Mumford, 2000). Developing lessons in this way can enhance the students' effort to understand, stay focused in their study, and have higher motivation (Brinton, Snow, and Wesche, 2003). Students will perform a learning activity by their personal interest while the interpersonal relationships between teachers and students will get improved (Hidi, 2000; Mumford, 2000). As evidenced from prior research, additionally, it has been found that developing lessons based on the needs of students has proven effective for language learning. Quesada and Aust (2006) found that the data gained from the needs analysis process helped the teacher design an affiliated English language learning instruction resource that met students' needs. The students were more autonomous and self-directed. The teachers could use more teacher-centred methods in their class. Because of the reasons given, it can be said that developing lessons using content derived from the students' preferences effectively develops

language competence. With such content areas used as context, students are likely to stay focused and have high motivation in their study.

When asked about the benefits of English grammar, both of the students and the English teaching staff thought that grammar itself enhanced their ability to use Standard English. From their opinions, grammatical knowledge helped them write correctly and understand the meaning of communication. Haussamen, Benjamin, Kolln, and Wheeler, (2003) claimed that grammatical knowledge helps students understand the conventions of Standard English, create a meaningful text, and reduce vernacular or non Standard English. Azar (2007), additionally, reported that the students who received grammar instruction usually had an advantage over those who lacked such instruction. They needed only a short explanation to understand the differences in meanings.

As for form-focused instruction with explicit explanations, both the students and the English teaching staff claimed that this teaching method gave students more opportunities to study both their subject matters and the English language. It encouraged students to apply what they had learned from the instruction to use in their writing. Such a finding yields support to previous research which confirms that form-focused instruction using explicit explanations can help students improve their grammatical competence and writing ability. Norris and Ortega (2000) reported that explicit teaching results in the achievement of grammatical features more than the implicit one. Wee, Sim, and Jusoff (2009) found that the students had fewer subject-verb agreement errors after they got a special treatment in explicit instruction. They suggested that the teacher should provide students overt corrective feedback by explicitly describing the errors the students have made. To help students apply their grammatical knowledge to use in their writing easily, the teacher can provide context and draw the students' attention to grammatical features using explicit explanations. As a matter of fact, it can be said that form-focused instruction with explicit explanations can effectively enhance grammatical competence and writing ability of students. They not only get clearer explanations in grammar usage, but they are also allowed to learn the language in context. As a result, students have better understanding of grammar usages and learn how to use them properly in their pieces of writing.

Form-focused instruction with explicit explanations helps students have more grammar comprehension and thus enhance their writing ability. Such instruction will be even more efficient if being transmitted through web-based technologies. Web-based technologies which include the web-based course, weblog, and Facebook can reinforce explicit form-focused instruction giving students convenience to study English grammar and practice writing. As evidenced by the results of the present study, the students and English teaching staff reported that web-based instruction had many advantages. The instruction provided students more opportunities to learn English writing from various media, such as videos and slides helped develop learning networking, and reduced the gaps of time and distance. Similar to this study, many scholars have claimed that the web can enhance students' interaction because it can be accessed 24/7. Pacheco (2005) claims that students can learn the language through various media, like electronic communication (emails), up-to-date course resources, newsgroups or forums, multimedia lecture presentations, and course management more than in a traditional classroom setting. Wong et al. (2007) found that the average score and the essay length of the treatment group who were allowed to use the web-based essay critiquing system were slightly higher than those of the control group. However, as noted earlier, even though it seems that web-based instruction has many benefits to language teaching, there are some negative effects as shown in the present study. The students claimed that web-based instruction had both positive and negative effects. They reported that Internet could increase laziness because students could postpone the date of studying. Moreover, on the web, students could not ask their teachers questions directly, so to deal with this problem, the present study allowed students to contact the teacher through Facebook. Accordingly, it can be said that web-based instruction has both positive and negative effects, but it seems to put more weigh on positive effects. Web-based instruction provides various learning options. Students can study from a variety of media. They can also study at their most convenience.

Needs analysis is a process which a course developer needs to do in order to enhance the course achievement. In this study, the participants among different groups had both similar and different opinions toward the course elements, like grammatical features and subject matters that should be included in the form-focused web-based

instruction. To enhance learning competence, the course developer needs to choose the items which are most required and relevant to the participants' needs and what has been specified in their traditional course. This will trigger students' intrinsic motivation, and as a result, they will have better outcomes in language learning.

5.2.2 Effectiveness of the Form-Focused Web-Based Instruction

The results of the present study indicated that the students' English grammatical competence and writing ability were enhanced after receiving the form-focused web-based instruction during the four-month period. The students gained higher scores in the post-test, the last worksheets of cloze and error recognition tests, and the last pieces of writing on the weblog. These results may have come from the reasons that the form-focused web-based instruction had useful characteristics that contributed to the enhancement of their English grammatical competence and writing ability.

1. Effects of Form-Focused Instruction with Explicit Explanations

According to the results of the study, the students showed improvements in English grammatical competence and writing ability after the treatment. In other words, all of these positive effects possibly resulted from the effectiveness of form-focused instruction with explicit explanations. As proved by the interview responses, many students reported that form-focused instruction with explicit explanations helped them understand the roles of sentences and purposes of pieces of writing.

Such findings yielded support to previous studies which confirm that form-focused instruction is an effective teaching method that combines positive effects of both focus-on-form and focus-on-forms instruction. This teaching type allows the teacher to choose either explicit or implicit teaching. Within a meaningful context, students can learn how to choose appropriate grammatical features because they can see the connection of various sentences (Nunan, 1998). They can see various uses of some grammatical features. They can also learn some other writing skills, like paragraph unity, paragraph organization, vocabulary, transition signals, capitalization, and many other skills at the same time. Especially when the explicit explanations are given, such an integration can facilitate implicit L2 knowledge in two principal ways (Pica, 1994). First, it enhances the students' abilities to notice linguistic properties of the language. Second, it helps students obtain intake that includes the way to process

grammatical information for short-term or medium-term memory (Pica, 1994). More than that, Ellis (2002a) states that when explicit teaching is sustained over a long period of time, it can promote the development of implicit knowledge which can be measured by students' performance in free production tasks. Given here, it can be said that form-focused instruction with explicit explanations can effectively enhance language competence of students. This is because form-focused instruction itself provides more options for teaching either explicitly or implicitly. Especially when explicit teaching is chosen, students will receive clearer explanations in grammar usage. Similar to what have been found in the present study, after students had grammar comprehension, it was easy for them to apply their grammatical knowledge to use in their writing.

Besides the above discussions, as evidenced by previous research, form-focused instruction with explicit explanations have brought about more accurate use of target language forms (Doughty and Verela, 1998; Ellis, Basturkmen, and Loewen, 2001; Jourdenais, Ota, Stauffer, Boyson, and Doughty, 1995). Norris and Ortega (2000) found that explicit instruction (the instruction that presents the language structure, describes, and exemplifies the rules for the students to make use in various sentences) better enhances comprehension in learning target grammatical items more than the implicit one which comprises only communicative exposure to the target form. Hulstijn and Hulstijn (1984) found that explicit teaching could reduce the students' writing errors. Green and Hecht (1992) found that the students who received the most explicit teaching could identify the correct rules most of the time. Pica (1985, 1994) found that with explicit teaching, the students could produce more accurate sentences than those without such the instruction.

In respect to the results of previous studies and those of the present study as mentioned above, it is pretty clear that form-focused instruction with explicit explanations has advantages for writing abilities of students more than implicit teaching.

Argumentatively, despite a large number of studies that have confirmed the effectiveness of form-focused instruction, there are some studies which have reported contradictory findings. Robb, Ross, and Shortreed (1986) found that grammar correction on students' essays could not help them enhance their writing ability as they

still made the same errors in follow-up writing assignments. In addition, as a supporter of this side, Widodo (2006) claims that with implicit teaching, students can learn the system of a language, such as grammar or sentence rules in the same way as children acquire their first language. Students are encouraged to discover and conclude the rules by themselves. In the classroom where implicit teaching is employed, the teacher can start a lesson by presenting some examples of sentences which can be either spoken or written and then students can learn grammatical rules from such examples. Widodo (2006) believes that implicit teaching can enhance learning autonomy and self-reliance because it trains students to be familiar with rule discovery. With such a learning style, students will be more active and easy to be motivated in the learning process. Given here, it can be said that there are some scholars who did not agree with using explicit form-focused instruction. Perhaps their arguments may have been derived from many factors, such as ages of students, teaching techniques, types of responses given to students, levels of writing, clarification of grammar explanations, and so on. All of them can affect the process of learning and hereby delay their language learning development.

However, even though some studies have shown that form-focused instruction with explicit explanations was not effective, the findings of the present study showed that this teaching method had advantages for students. This is possibly because the instruction used in some of the previous studies may have been confusing and the rules may have been too complicated to understand (Whinney, 1997). Different from the present study, a more systematic process was done. A needs analysis was conducted before the experiment, so the researcher knew the students' needs beforehand. What types of English grammatical features and content areas were required for the students were made known. Apart from this, the students were also given an opportunity to study from the web-based course which served the desires of various learning styles. On the website, students could view the lessons, watched the video presentations, did cloze and error recognition tests, played language games, and practiced writing on the weblog. In addition, when they had problems in using English grammatical features and structures for their writing, they could discuss with their friends and the teacher on Facebook. All of these brought about the enhancement of the students' English

grammatical competence and writing ability after they received the form-focused web-based instruction.

2. Effects of Web-Based Instruction as a Source of Ongoing Learning

From the results of the study, the students reported that the web-based course accompanying the weblog and Facebook were effective and appropriate for grammatical and writing instruction. They said that these Internet technologies were a big source of information that provided them convenience for learning. They could review lessons more than once on the web-based course. They could practice writing anytime as they desired on the weblog. When they had difficulties with English grammar and writing, they could ask, discuss with, and contact the teacher or even other learners on Facebook. All of these were some of the benefits the students reported that they received from web-based instruction.

The findings as mentioned above yield support to previous research which confirms that web-based instruction has many advantages for language learning. Hiltz and Shea (2005) point out that the primary benefit of web-based courses for students and teachers is convenience. They can save time and money since learning through the web does not require extensive travel expense (Tutunea, Rus, and Toader, 2009). Students can contact and work collaboratively with their friends or with their teachers on the web as well. The web can also transfer large databases, text files, images, and multimedia files all over the world, giving distant students the possibility to study in the courses and obtain necessary materials no matter where they are (Tutunea, Rus, and Toader, 2009).

As supported by previous studies, web-based instruction can lead students to the achievement of their writing abilities. Chuo (2007) found that the WebQuest Writing Instruction not only enhanced students' writing proficiency but also provided a positive learning experience. Apart from this, Fellner and Apple (2006) found the EFL students who were exposed to CALL tasks, like a web listening, reading, and vocabulary building, and a class free writing blog easily gained new vocabulary knowledge. All in all, concerning the advantages of web-based instruction as cited by scholars, positive effects found in the previous studies, and those of the present study, it can be said that web-based instruction should be promoted for uses in language teaching.

As for the effectiveness of the other two Web 2.0 technologies like weblog and Facebook, similar to what have been found in the present study, many researchers have confirmed their effectiveness in several ways. Wright, Knight, and Pomerleau (1999) point out that weblog can promote communicative, cognitive, and sociocognitive views of language instruction. In other words, besides students can practice writing on the weblog at their convenience, they can interact with other people in a meaningful way. They can post their pieces of writing and get feedback from various groups of people in a short time. People other than their friends and teachers can view their pieces of writing and give some comments. Such typical quality of weblog makes students write with the awareness that anyone could see their writings, so they are likely to be more careful when they are writing. Apart from this, they can view other pieces of writing which might be used as a guideline to improve their own. They can also explore other weblogs and learn about other cultures. Wright, Knight, and Pomerleau (1999), Ward (2004), and Simsek (2009) confirm that all of these features have a significant influence on writing abilities. Simsek (2009) found that the weblog integrated writing instruction improved the students' writing abilities at a significant level. The students who received the weblog integrated writing instruction created meaningful contents and well-organized paragraphs better than those who received in-class writing instruction. The weblog could develop a sense of ownership and responsibility, hence promoting positive results in their language learning. In terms of Facebook, Shih (2011) reported that the students made improvements in paragraph organizations, content, vocabulary, spelling, and grammar after receiving Facebook integrated blended learning. The students mentioned that Facebook not only facilitated peer assessment but also motivated them to participate more in their language learning. Al-Shehri (2011) found that Facebook built a positive language learning atmosphere and developed the abilities to synthesize ideas and facts from various sources of information.

Based on the findings of the present study and those of the previous studies, it can be concluded that web-based instruction should be promoted for uses in language class.

3. Attitudes of the Students toward the Form-Focused Web-Based Instruction

The results of the study showed that the students had positive attitudes toward the uses of form-focused web-based instruction. They said that the lessons which utilized the form-focused instruction gave them both useful contexts and grammar explanations, all of which helped them apply English grammatical features and structures to use for their writing better and more correctly. Especially when the lessons were transmitted through web-based technologies, the students claimed that they received more convenience in learning. As for the weblog and Facebook, they claimed that the weblog could help them understand English grammar and write better because it was easy for them to get the teacher's comments and learn how to correct the errors. Meanwhile, Facebook was a modern technology that many of them usually used and were familiar with. They could also get the answers for their questions in the right time because they could ask the teacher, friends, or someone else on Facebook by chatting. All in all, with useful characteristics of these web technologies which provided convenience and form-focused instruction which provided contexts for grammar learning, students could improve their writing ability in the end.

All of the aforementioned information seems to shed light on the positive thoughts that the students have for the web-based instruction. However, this is not what was only found in the present study. Many prior studies have shown that web-based instruction can promote positive attitudes of the ESL students, and such the positive thoughts can lead to better performance in their writing abilities (Braine, 1997; Liou, 1997; Pennington, 1993; Sullivan and Pratt, 1996). Al-Jarf (2004), for example, claims that web-based technologies could increase the students' self-esteem, motivation, and sense of achievement; all of these can lead to the improvement in their writing abilities. In other words, web-based technologies can make writing tasks become enjoyable, and hereby encourage more writing and exchanging of thoughts outside the classrooms. Moreover, Altun (2005) found that computer-mediated communication (CMC) tools could develop positive attitudes of students. The students had the interests in the use of such tools in their future professional development. Ward and Newlands (1998) found that students in their study wanted to use the web-based materials as an addition to their course because it provided more effective

learning resources as well as more flexible learning pace. Tyan and Hong (1998) found that the students who studied in a Business Policy course had positive attitudes toward the use of computer-mediated communication tools because such the tools assisted them in communicating with their peers and the teacher (Tyan and Hong, 1998).

To sum up, one of the reasons that perhaps led the students to the achievement of their grammatical competence and writing ability in the present study was from their positive attitudes given to the instruction. This is because it has been accepted that attitudes have an effect on learning behaviour (Cotterall, 1995; Cotterall, 1999; Reid, 1987). This means that positive attitudes can increase the students' willingness to do activities (Avery and Ehrlich, 1992; Clement, 1986; Gardner, 1991; Gass and Selinker, 2001; LoCastro, 2001; Pavlenko, 2002; Skehan, 1989). Like in the present study, since most of the students had positive attitudes toward the form-focused web-based instruction, many of them did better in the later worksheets of both cloze and error recognition tests. They wrote better in their last pieces of writing on the weblog and got higher scores in the grammatical and writing parts in the post-test. This is because the students could develop self-correcting errors which resulted from having positive attitudes and integrative motivation (Skehan, 1989). Because of the reasons given, accordingly, it can be said that positive attitudes of students toward the form-focused web-based instruction could bring about the success in their grammatical competence and writing ability.

4. Web-Based Instruction and Social Constructivism

Derived from the work of a Russian psychologist L. S. Vygotsky, Social Constructivism places a great emphasis on culture and context in forming understanding (Vygotsky, 1978). Learning is not a purely internal process, but it is related to the context in which the learning occurs. In this theory, language and communication are the main focus. Learning is considered as an iterative process which includes discursive, adaptive, interactive, and reflexive qualities (Laurillard, 1993). In this sense, web-based instruction seems to support the theories. As a piece of evidence, the results of the present study showed that the students made improvements in English grammatical competence and writing ability after accessing the web-based course, participating on Facebook, and practicing writing on the weblog. When

students had difficulties in learning English grammar and structures, they could use the website www.noiwebcouse.com as a source of information by studying grammar lessons, watching videos, and doing cloze and error recognition tests. After they had more comprehension, they could practice writing on the weblog. Furthermore, they could discuss, negotiate, collaborate, and share their thoughts with the teacher, their friends, or other users on Facebook. Such positive results possibly came from the reason that a collaborative environment is built on these web-based technologies (Dawson, 2008). Web-based instruction can facilitate and strengthen explicit form-focused instruction. This yields support to the theory of Social Constructivism that web-based instruction can help students move from their actual stage of development (the stage where they can master the task themselves) to potential stage of development (the stage where their language knowledge is enhanced after receiving assistance) by facilitating their learning. In other words, students can use web-based technologies as a scaffold to aid them in learning English grammar and writing.

Given above, it can be said web-based technologies have features that are relevant to the perspectives of Social Constructivism that should be promoted in a language class.

5.3 Implications of the Findings

The study findings have indicated that form-focused web-based instruction was effective for sports science students to enhance their English grammatical competence and writing ability. In other words, it can be said that web-based technologies and explicit form-focused instruction can work well with each other. Web-based technologies are alternative learning tools which should be promoted as a medium to transfer instruction while explicit form-focused instruction can help students apply some grammatical features and structures to use in their pieces of writing. It is hoped that the findings of the study as well as the information from prior studies will be useful for language teachers and course developers to apply for use in the classrooms or for the development of a language course.

5.3.1 Language Teachers

1. Explicit Form-Focused Instruction

The findings have indicated that explicit form-focused instruction is worth promoting to teach English grammar and writing. It helped students understand the role of sentences. The students had a reduction in grammatical and other writing errors. They were able to add, abbreviate, replace, or mix words, phrases, clauses, and sentences in the paragraph accurately and appropriately as well.

On the website, there are grammar lessons, cloze tests, and error recognition tests. Each grammar lesson includes examples of the uses of English grammar in the sentence and paragraph levels. The teacher can employ pre-emptive feedback to draw the students' attention to grammatical features and structures that seem to be problematic and then explain their uses in different contexts. Following the grammar lessons, the teachers can assign students to do cloze and error recognition tests. In the cloze tests, there are blanks for student to fill in the right answers while in the error recognition tests, students need to identify the errors and write the corrections in the blanks. The teachers can use reactive feedback by allowing students to give their answers to the class. If they give wrong answers, the teachers give them the right ones and explicitly explain the answers. After having more grammar comprehension, students should be assigned to create their own English paragraphs. The length of paragraphs can vary depending on the levels of students' language proficiency. The teachers can present examples of good pieces of writing to class and explicitly explain how to use some English grammatical features to create sentences in the paragraph. The teachers can also show some errors made by students anonymously. They can explain the causes of errors as well as the way to correct them.

Given the above discussion, explicit form-focused instruction seems to be useful for the development of English grammar and writing skills. It could be even more advantageous if the instruction is transmitted through web-based language learning technologies.

2. Web-Based Instruction

The findings have indicated that web-based instruction (web-based course, Facebook, and weblog) is effective and appropriate for learning English grammar and writing. The students could review the lessons on the web-based course and practice

writing on the weblog as they desired. When they had difficulties in using some English grammatical features or writing, they could discuss with the teacher, their friends or even other users on Facebook as well. These are some of the positive effects the students described after they had studied from the web-based instruction.

In this study, there are eight topics in the fields of sports science available on the website www.noiwebcourse.com. Each topic includes a cloze test, an error recognition test, and a grammar lesson. The teachers can print out these exercises and present them to students in the classroom in order to enhance their learning interest before they are assigned to access the website. The teachers can present videos on the website to students and explain how they can download the video files as well. Links to grammar and writing games should be presented to students in order to show how enjoyable the lessons will be when they are learning on the website. Moreover, to assess their learning improvement, the topics should be assigned in a chronological order. After completing exercises, students should print them out in the form of worksheets and show the points they get.

To promote social interaction and enhance a good relationship between the teachers and students as well as among the students themselves, the teachers can use Facebook as a means to keep contact with students about their problems in learning. Students can be encouraged to create Facebook accounts and add the teachers and classmates as friends. Students should be allowed to report the problems they have when doing exercises like cloze and error recognition tests on Facebook so that the teachers can make some further improvement. Office hours should be given to students so that they will know the time when they can discuss with the teachers. Students who are introverts, especially, may feel embarrassed to ask the teachers on Facebook, so they should be given an opportunity to discuss with other Facebook friends as well.

To check students' writing progress, weblog is an alternative choice for writing practice. The teacher can explain to students how to post their pieces of writing on the weblog. After they post some work, corrective feedback should be given to students within a short time. This will help them learn about their mistakes. As a result, students will be able to make some further improvements in the follow-up writing assignments. However, the teacher should have a strict rule to prohibit students from

copying pieces of writing from other classmates, such as making a reduction of scoring marks.

The aforementioned information suggests that web-based instruction is an effective teaching approach. It gives the teachers more choices to interact with students. The teachers can chat with students and answer their learning problems on Facebook and provide correction for the students' pieces of writing on weblog.

5.3.2 Course Developers

From the findings of the study, it was found that the students performed better in both their uses of English grammar and writing. This suggests that the web-based course as well as Facebook and weblog could enhance grammatical competence and writing ability of Thai undergraduate sports science students. In other words, these positive results may be derived from the course which was developed in the systematic way. Due to this reason, course developers who are interested in developing web-based courses can use the procedures as done in the present study to develop their own courses.

First of all, course developers need to do needs analysis because it helps them know about the students' problems in learning as well as their preferences and interests, all of which can be used for making decisions about course design (Graves, 2000). Especially for the web-based course, course developers have to design the courses which closely meet the needs of the students (Leacock and Nesbit, 2007). This is because they are distance language programs, so they require careful planning on the basis of a clear understanding of the students' needs (Doughty and Long, 2003). After that, to prove whether or not the course they designed was effective for students, it needs to be piloted and used with the real people. Like in this study, after the course was piloted, the researchers gained some information that could be used for improving some weaknesses of the course. Finally, course developers need to check the students' attitudes after the course implementation because. This process helps course developers know about the course effectiveness, appropriateness, positive effects, and negative effects, all of which may be useful for course development in future studies.

In short, to develop an effective language course, the course developer may follow the procedures as shown above, needs analysis, piloting course and implementation, and surveying attitudes. Needs analysis helps the course developer

know about the needs, interests, and preferences of the students. Piloting course and implementation helps the course developer know about how to adjust the course and whether or not it is worth being developed. Surveying attitudes helps the course developer know about the students' attitudes toward the course as well as its weak and strong points.

5.4 Recommendations of the Study

1. In this study, sports science students were recruited as the subjects of the study and as a result, it was found that the form-focused web-based instruction could work well with this group of students. In the future, researchers who are interested in this teaching type can use students from other fields, such as science, engineering, nursing, medical technologies, arts, and so on. However, the content used for the course development should be derived from the needs of students. This is because needs analysis is an important process for the course development. The researchers need to know what contents the students are exactly interested in. Hence, the course developed will be perfectly matched with the students and thereby lead to the success in language learning.

2. Instead of using Facebook, weblog, and web-based course like in the present study, future researchers may use some other web technologies to study the effects of the technologies on the enhancement of the students' language competence. They may conduct a study using some other interactive technologies, like gaming interference, interactive flash animations, simulation with 3D graphics, Twitter, Skype, MySpace or virtual reality environments in their experiment.

3. In the present study, the students' enhancement in their English grammatical competence and writing ability were examined using research instruments, like pre-test, post-test, and pieces of writing on the weblog. Instead of this, future researchers may use real-life instruments, such as mid-term exams, final exams, or even writing tests in the classrooms. The researchers may explore the enhancement of the students' language competence by comparing the gain scores in the mid-term exam with the final exam, for example.

4. Other than setting the aim to enhance writing skills as done in the present study, future researchers can experience with using grammar to enhance other

language skills. They can study how grammar teaching on web-based technologies can enhance speaking, reading, and listening skills of the students as well.

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Appendices

APPENDIX A

Questionnaire for Sports Science Students

Title: The Development of a Form-Focused Web-Based Instruction to Enhance the English Grammatical and Writing Competence of Thai Undergraduate Sports Science Students

Part 1 **Background Information, Background in the English Language, and Readiness in the Internet Access (Please provide true information)**

<u>Background Information</u>   Gender ☐ Female   ☐ Male   Age ☐

Year ☐   Semester ☐   Academic Year ....   Field of Study........................

Degree   ☐ High School Diploma ☐ Vocational Degree   ☐ Others..............................

<u>Background in the English Language</u>   I have studied English for ☐ years and ☐ months.

Grade in the English Subject from the Previous Semester...................

Writing Experience in the English Language   ☐ Yes   ☐ No

Levels of Your English Writing Abilities

Please put a tick ☑ in the box that shows your writing abilities in the English language

☐ 5 Excellent	Write fluently and efficiently. Be capable of using the language accurately and appropriately for purposes, content, and social context. Don't have problems in writing. Be able to check and revise one's own pieces of writing.
☐ 4 Very Good	Write fluently, but still have few writing errors, such as selection of some words and grammatical features. Be able to write in the content that can cover the specified topic. Be able to check and revise one's own pieces of writing.
☐ 3 Good	Write fluently, but still have some writing errors. Sometimes make the readers confused with some information. Be able to check and revise one's own major errors. Have problems with paragraph organization, selection of words, grammatical features, and spelling.
☐ 2 Fair	Write fluently, but usually make the readers confused. Be able to check and revise one's own minor writing errors. Have problems with paragraph organization, selection of words, grammatical features, content, and spelling.
☐ 1 Poor	Unable to write by oneself and usually make the readers confused with one's own pieces of writing. Require examples of good pieces of writing. Use dictionaries all the time. Unable to check or revise one's own pieces of writing. Have problems with language structure. Unable to use the language appropriate for purposes of writing. Have problems with selection of words, paragraph organization, grammatical features, content, and spelling.

<u>Readiness in the Internet Access</u>

I surf the Internet.

☐ Everyday   ☐ ....Times a Week   ☐ ....Times a Month   ☐ .....Times a Year   ☐ Never

I visit English teaching websites.

☐ Everyday   ☐ ....Times a Week   ☐ ....Times a Month   ☐ .....Times a Year   ☐ Never

I can use …..

☐ Facebook   ☐ Weblog   ☐ Hi 5   ☐ Twitter   ☐ Others.......

I usually surf the Internet…..

☐ At Home   ☐ in the University   ☐ in the Internet Cafe   ☐ with the Notebook   ☐ Others.........

Part 2

Importance of English Grammatical Features and Structures for Writing Ability

Levels of Importance   5 = Extremely Important

4 = Very Important

3 = Moderately Important

2 = Slightly Important

1 = Not At All Important

Instructions   Please put ticks ☑ in the boxes that show the levels of importance of English grammatical features and structures for writing ability

Part 2/1 English Grammatical Features and Structures	Levels of Importance for Writing Ability				
	5	4	3	2	1
Articles (a, an, the) and Determiners (this, that, these, those, my, her, his, our, their, your, its)					
Pronouns					
Adverbs					
Adjectives					
Nouns					
Verbs (modal verbs, auxiliary verbs, verbs)					
Verb Tenses					
Infinitive and Gerund					
Prepositions					
Coordinating Conjunctions					
Relative Clauses and Relative Pronouns (who, which, that, etc)					

Part 2/1 English Grammatical Features and Structures	Levels of Importance for Writing Ability				
	5	**4**	**3**	**2**	**1**
Comparatives and Superlatives					
Passive Voice and Active Voice					
Reported Speech					
Subject-Verb Agreements					
Word Order					
Phrases (noun phrases, verb phrases, prepositional phrases, etc.)					
Types of Sentences (simple, compound, and complex sentences) and Clauses (dependent clauses and independent clauses)					
IF-Clauses					
Punctuation Marks					
Run-on Sentences and Fragments					
Others					

Part 3

Importance of Content Matters in Sports Science for Everyday Life and Occupations

Levels of Importance

5 = Extremely Important

4 = Very Important

3 = Moderately Important

2 = Slightly Important

1 = Not Important At All

Instructions Put ticks ☑ in the boxes that show the levels of importance of content matters.

Part 3/1 Types of Sports	Levels of Importance in Everyday Life					Levels of Importance in Occupations				
	5	**4**	**3**	**2**	**1**	**5**	**4**	**3**	**2**	**1**
Swimming										
Rowing										
Track Athletics										
Field Athletics										

Part 3/1 Types of Sports	Levels of Importance in Everyday Life						Levels of Importance in Occupations				
	5	4	3	2	1		5	4	3	2	1
Football											
Rugby Football											
Basketball											
Volleyball											
Sepak Takraw											
Petanque											
Martial Arts											
Taekwondo											
Judo											
Thai Boxing											
Swordplay											
Fencing											
Tennis											
Table Tennis											
Badminton											
Gymnastics											
Rhythmic Sportive Gymnastics											
Aerobic Dance											
Yoga											
Social Dance											
Others											

Part 3/2 General Education for Sports Science	Levels of Importance in Everyday Life						Levels of Importance in Occupations				
	5	4	3	2	1		5	4	3	2	1
General Aspects of Sports Science											
General Aspects of Sports Medicine											
Sports Science Terminology											

Part 3/2 General Education for Sports Science	Levels of Importance in Everyday Life						Levels of Importance in Occupations				
	5	4	3	2	1		5	4	3	2	1
Philosophy, Ethics, and Legal Aspects of Sports											
Sports Information and Illustration											
Microcomputer Application and Information Technology in Sports											
Statistics and Research Methodology for Sports Science											
Others											

Part 3/3 Science and Mathematics for Sports Science	Levels of Importance in Everyday Life						Levels of Importance in Occupations				
	5	4	3	2	1		5	4	3	2	1
General Chemistry											
Introductory Biology											
Biochemistry for Sports Science											
Mathematics											
Basic Physiology											
Basic Anatomy											
Laboratory in Basic Medical Science											
Others											

Part 3/4 Special Subjects for Professions in Sports Science	Levels of Importance in Everyday Life						Levels of Importance in Occupations				
	5	4	3	2	1		5	4	3	2	1
Scientific Principles of Sports Training											
Sports Technology											
Motor Learning											
Applied Anatomy in Sports Science											
Physical Fitness Training											

Part 3/4 Special Subjects for Professions in Sports Science	Levels of Importance in Everyday Life						Levels of Importance in Occupations				
	5	4	3	2	1		5	4	3	2	1
Physiology of Exercise											
First Aid and Resuscitation											
Sports Injuries and Rehabilitation											
Sports Pharmacology											
Sports Hygiene											
Sports Nutrition											
Sports Psychology											
Basic Recreation, Equipment, and Facilities in Sports											
Sports for Special Groups, such as sports for disabilities											
Others											

Part 4

Effects of Form-Focused Instruction and Web-Based Instruction toward the Enhancement of English Grammatical Competence and Writing Ability

1. Form-focused instruction is a teaching method which emphasizes linguistic forms and their uses in meaningful context. In the present study, the researcher uses content matters in sports science as the context for teaching English grammatical features and structures. It is expected that this can enhance English grammatical competence and writing ability of students.

2. Web-based instruction refers to an online teaching. The present study has the web-based course which is used accompanying the web 2.0 technologies: Facebook and weblog.

Levels of Agreement   5 = Strongly Agree

4 = Agree

3 = Neutral

2 = Disagree

1 = Strongly Disagree

Instructions   Please put ticks ☑ in the boxes that show your levels of agreement

Part 4/1 Advantages of Grammar Instruction for Writing Ability	Levels of Agreement				
	5	4	3	2	1
Understand meanings of communication in general. Grammar helps synthesize contents and has an effect on other language skills which are concerned with learners' communication.					
Learn language better and faster					
Use language in a standard way					
Communicate and interpret contents of study accurately and appropriately					
Reduce writing errors					
Develop writing abilities in general. Learners can check and correct their own writing errors.					
Have confidence in writing. Learners can add, omit, replace, or combine words, phrases, clauses, and sentences in a paragraph correctly and appropriately					
Enhance analytical abilities so that learners can find meanings, roles of sentences, and purposes of pieces of writing efficiently					
Choose appropriate words to create sentences and paragraphs correctly, appropriately and easily					
Others					

Part 4/2 Advantages of Using Content Matters in Sports Science as the Context for Study	Levels of Agreement				
	5	4	3	2	1
Learn both content matters and the English language at the same time					
Learn and develop writing skills from the contents they need to use in their everyday lives					
Enhance enthusiasm to learn language and make their English learning not boring					
Enhance analytical skills in academic and social contexts					
Encourage learners to use knowledge or anything they have learned to apply for use in their writing					
Know writing direction					
See how to use some grammatical items and how they are changed upon context					

Part 4/2 Advantages of Using Content Matters in Sports Science as the Context for Study	Levels of Agreement				
	5	4	3	2	1
Learn grammar accompanying with vocabulary, paragraph organization, communicative skills, and writing techniques at the same time					
Write sentences and a paragraph correctly from the context and purposes of writing					
Others					

Part 4/3 Advantages of Web-Based Instruction	Levels of Agreement				
	5	4	3	2	1
Develop a learning network					
Emphasize learner centeredness					
Reduce gaps of time and distance					
Save expenses for learning and travelling. Learners can learn online lessons at home.					
Promote acquisition and make learning language not boring					
Learn English writing from several types of media, such as videos, slides, and other multimedia					
Do exercises and check answers immediately					
Exchange thoughts, discuss about problems in writing through social networking, like Facebook, weblog, and other media					
Learn English wring from authentic resources					
Others					

Part 5 Your opinions about some interesting lessons and activities which can be taught and used in the web-based course which aims to enhance your English grammatical competence and writing ability

....
....
....
....

Thank You for Your Participation

> **Questionnaire for People Who Worked in the Fields of Sports Science**

Title : The Development of a Form-Focused Web-Based Instruction to Enhance the English Grammatical and Writing Competence of Thai Undergraduate Sports Science Students

| Part 1 | **Background Information (Please provide true information)** |

Gender ☐ Female ☐ Male Age ☐

Degree ☐ Bachelor's Degree ☐ Master's Degree
☐ Doctoral Degree ☐ Vocational Degree ☐ Others…………………

Present Occupation …………………………. Position ……………………………………….

The jobs you are having or used to have in the fields of sports science (Please specify)………………………

Duration of your work in the fields of sports science ☐ years ☐ months ☐ days

In general, to what extent the English language skills are important for your occupation and everyday life?

Level of Importance for Your Occupation

☐ Extremely Important ☐ Very Important ☐ Moderately Important
☐ Slightly Important ☐ Not at All Important

Level of Importance for Your Everyday Life

☐ Extremely Important ☐ Very Important ☐ Moderately Important
☐ Slightly Important ☐ Not at All Important

Levels of Your English Proficiency for Communication in Occupation and Everyday Life

Level of Your English Proficiency for Occupation

☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor

Level of Your English Proficiency for Everyday Life

☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor

How often do you have problems in using English in your occupation and everyday life?

Level of Problems You Have Found in using English in Occupation

☐ Very Frequently ☐ Frequently ☐ Sometimes ☐ Rarely ☐ Never

Level of Problems You Have Found in using English in Everyday Life

☐ Very Frequently ☐ Frequently ☐ Sometimes ☐ Rarely ☐ Never

How often do you have problems in writing English in your occupation and everyday life?

Level of Problems in Writing English You Have Found in Occupation

☐ Very Frequently ☐ Frequently ☐ Sometimes ☐ Rarely ☐ Never

Level of Problems in Writing English You Have Found in Everyday Life

☐ Very Frequently ☐ Frequently ☐ Sometimes ☐ Rarely ☐ Never

Levels of Your English Writing Abilities for Occupation and Everyday Life

Level of Your English Writing Abilities for Occupation

☐ Excellent   ☐ Very Good   ☐ Good   ☐ Fair   ☐ Poor

Level of Your English Writing Abilities for Everyday Life

☐ Excellent   ☐ Very Good   ☐ Good   ☐ Fair   ☐ Poor

When comparing with other language skills, to what extent do you think writing abilities are important for your occupation and everyday life?

Importance of Writing Abilities for Your Occupation

☐ More Important   ☐ Equal   ☐ Less Important than Reading

☐ More Important   ☐ Equal   ☐ Less Important than Listening

☐ More Important   ☐ Equal   ☐ Less Important than Speaking

Importance of Writing Abilities for Everyday Life

☐ More Important   ☐ Equal   ☐ Less Important than Reading

☐ More Important   ☐ Equal   ☐ Less Important than Listening

☐ More Important   ☐ Equal   ☐ Less Important than Speaking

Part 2   **Types of Writing Necessary for Everyday Life and Occupation**

Levels of Use   5 = A Great Deal

4 = A Moderate Amount

3 = Occasionally

2 = Rarely

1 = Never

Instructions   Please put ticks ☑ in the boxes that show the frequency of writing work you have found in your occupation and everyday life.

Part 2/1 Types of Writing	Levels of Use in Everyday Life					Levels of Use in Occupation				
	5	4	3	2	1	5	4	3	2	1
Filling in forms, such as work contracts, application forms, etc.										
Notes, such as short notes, reports, writing about opinions, writing contact and order, etc.										
Summarization										
Articles										
Slogans										

Part 2/1 Types of Writing	Levels of Use in Everyday Life						Levels of Use in Occupation				
	5	4	3	2	1		5	4	3	2	1
Projects											
Letters, such as application letters, ordering, questionnaire, etc.											
Governmental letters											
Public relation letters											
Inviting Letters for Meetings											
Reports, such as meeting reports, reports about sports practice, reports about the athletes' injuries, etc.											
Others											

Part 3

Importance of Content Matters in Sports Science for Everyday Life and Occupations

Levels of Importance

5 = Extremely Important

4 = Very Important

3 = Moderately Important

2 = Slightly Important

1 = Not Important At All

Instructions Put ticks ☑ in the boxes that show the levels of importance of content matters

Part 3/1 Types of Sports	Levels of Importance in Everyday Life						Levels of Importance in Occupations				
	5	4	3	2	1		5	4	3	2	1
Swimming											
Rowing											
Track Athletics											
Field Athletics											
Football											
Rugby Football											
Basketball											
Volleyball											

Part 3/1 Types of Sports	Levels of Importance in Everyday Life						Levels of Importance in Occupations				
	5	4	3	2	1		5	4	3	2	1
Sepak Takraw											
Petanque											
Martial Arts											
Taekwondo											
Judo											
Thai Boxing											
Swordplay											
Fencing											
Tennis											
Table Tennis											
Badminton											
Gymnastics											
Rhythmic Sportive Gymnastics											
Aerobic Dance											
Yoga											
Social Dance											
Others											

Part 3/2 General Education for Sports Science	Levels of Importance for Everyday Life						Levels of importance for Occupations				
	5	4	3	2	1		5	4	3	2	1
General Aspects of Sports Science											
General Aspects of Sports Medicine											
Sports Science Terminology											
Philosophy, Ethics, and Legal Aspects of Sports											
Sports Information and Illustration											
Microcomputer Application and Information Technology in Sports											

Part 3/2 General Education for Sports Science	Levels of Importance for Everyday Life						Levels of importance for Occupations				
	5	4	3	2	1		5	4	3	2	1
Statistics and Research Methodology for Sports Science											
Others											

Part 3/3 Science and Mathematics for Sports Science	Levels of Importance for Everyday Life						Levels of Importance for Occupations				
	5	4	3	2	1		5	4	3	2	1
General Chemistry											
Introductory Biology											
Biochemistry for Sports Science											
Mathematics											
Basic Physiology											
Basic Anatomy											
Laboratory in Basic Medical Science											
Others											

Part 3/4 Special Subjects for Professions in Sports Science	Levels of Importance for Everyday Life						Levels of Importance for Occupations				
	5	4	3	2	1		5	4	3	2	1
Scientific Principles of Sports Training											
Sports Technology											
Motor Learning											
Applied Anatomy in Sports Science											
Physical Fitness Training											
Physiology of Exercise											
First Aid and Resuscitation											
Sports Injuries and Rehabilitation											
Sports Pharmacology											
Sports Hygiene											

Part 3/4 Special Subjects for Professions in Sports Science	Levels of Importance for Everyday Life						Levels of Importance for Occupations				
	5	4	3	2	1		5	4	3	2	1
Sports Nutrition											
Sports Psychology											
Basic Recreation, Equipment, and Facilities in Sports											
Sports for Special Groups, such as sports for disabilities											
Others											

Part 4   Your opinions which may be useful for the development of English Instruction, especially English writing abilities of undergraduate sports science students

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Thank You for Your Participation

Questionnaire for Chair of the English Program, Course Coordinator, and English Instructors

Title : The Development of a Form-Focused Web-Based Instruction to Enhance the English Grammatical and Writing Competence of Thai Undergraduate Sports Science Students

Part 1

Background Information (Please provide true information)

Gender ☐ Female ☐ Male Age ☐

Degree ☐ Bachelor's Degree ☐ Master's Degree
☐ Doctoral Degree ☐ Post Doctoral Degree

Academic Position ☐ Assistant Professor ☐ Associate Professor
☐ Professor ☐ Lecturers ☐ Others ……………

Academic Publication ☐ Textbooks ☐ Journals ☐ Articles
☐ Learning Materials ☐ Others ....

Experience in English Instruction ☐ Years ☐ Months ☐ Days

Part 2

Tendency in Developing the English Curriculum

* Questions for the Chair of the English Program

1. In general, what types of teaching and learning does the English curriculum of the faculty focus on, such as learner centeredness, autonomous learning, group based learning, etc.?

....

2. In general, what theories or teaching principles were used as a background for developing English courses for first year students?

....

3. At the moment, do you have additional policies for developing English courses? If yes, what are the characteristics of the courses? What skills do the courses focus on? What are the purposes of the courses? What types of media are used in the courses? How many weeks are required for studying? What are the evaluation criteria in the courses?

....

* Questions for the Course Coordinator

1. What theories or teaching principles are used as a background for developing the English Level 1 Course which is open for first year sports science students?

....

2. What skills are emphasized in the English Level 1 Course which is open for sports science students? What are the purposes of the course? What types of books, lessons and learning media are used for teaching in the course? How many weeks are required for studying? What is the evaluation criterion of the course?

....

....

Part 3   **Importance of English Grammatical Features and Structures for Writing Ability**

Levels of Importance   5 = Extremely Important

4 = Very Important

3 = Moderately Important

2 = Slightly Important

1 = Not At All Important

Instructions   Please put ticks ☑ in the boxes that show the levels of importance of English grammatical features and structures for writing ability.

Part 3/1 English Grammatical Features and Structures	Levels of Importance for Writing Ability				
	5	4	3	2	1
Articles (a, an, the) and Determiners (this, that, these, those, my, her, his, our, their, your, its)					
Pronouns					
Adverbs					
Adjectives					
Nouns					
Verbs (modal verbs, auxiliary verbs, verbs)					
Verb Tenses					
Infinitive and Gerund					
Prepositions					
Coordinating Conjunctions					
Relative Clauses and Relative Pronouns (who, which, that, etc)					
Comparatives and Superlatives					
Passive Voice and Active Voice					
Reported Speech					
Subject-Verb Agreements					

Part 3/1 English Grammatical Features and Structures	Levels of Importance for Writing Ability				
	5	4	3	2	1
Word Order					
Phrases (noun phrases, verb phrases, prepositional phrases, etc.)					
Types of Sentences (simple, compound, and complex sentences) and Clauses (dependent clauses and independent clauses)					
IF-Clauses					
Punctuation Marks					
Run-on Sentences and Fragments					
Others					

Part 4

Errors in English Grammatical Features and Structures which are shown in the Students' Pieces of Writing

* Questions for English Instructors and Course Coordinator

Frequency of Errors   5 = A Great Deal

                                       4 = A Moderate Amount

                                       3 = Occasionally

                                       2 = Rarely

                                       1 = Never

Instructions

Please put ticks ☑ in the boxes that show the frequency of English grammatical features and structures' errors found in the students' pieces of writing.

Part 4/1 Errors in English grammatical features and structures found in the students' pieces of writing	Errors Found in Writing Work of Students from Other Faculties					Errors Found in Writing Work of Sports Science Students				
	5	4	3	2	1	5	4	3	2	1
Missing Punctuation Marks										
Comma Splice										
Vague Pronoun Reference										
Wrong or Missing Verb Ending										
Wrong or Missing Noun Ending										

Part 4/1 Errors in English grammatical features and structures found in the students' pieces of writing	Errors Found in Writing Work of Students from Other Faculties					Errors Found in Writing Work of Sports Science Students				
	5	4	3	2	1	5	4	3	2	1
Wrong or Missing Prepositions										
Wrong or Missing Articles (a, an, the) and Other Determiners										
Wrong or Missing Verb Tenses										
Irrelevance of Subject-Verb Agreements										
Sentence Fragments										
Misplaced or Dangling Modifiers										
Wrong Word Order in the Sentence										
Wrong Sentence Order in the Paragraph										
Writing Sentences that Are Not Understandable										
Others										

Part 5

Effects of form-Focused Instruction and Web-Based Instruction toward the Enhancement of English Grammatical Competence and Writing Ability

Levels of Agreement 5 = Strongly Agree

4 = Agree

3 = Neutral

2 = Disagree

1 = Strongly Disagree

Instructions Please put ticks ☑ in the boxes that show your levels of agreement.

Part 5/1 Advantages of Grammar Instruction for Writing Ability	Levels of Agreement				
	5	4	3	2	1
Understand meanings of communication in general. Grammar helps synthesize contents and has an effect on other language skills which are concerned with learners' communication.					
Learn language better and faster					
Use language in a standard way					

Part 5/1 Advantages of Grammar Instruction for Writing Ability	Levels of Agreement				
	5	4	3	2	1
Communicate and interpret contents of study accurately and appropriately					
Reduce writing errors					
Develop writing abilities in general. Learners can check and correct their own writing errors.					
Have confidence in writing. Learners can add, omit, replace, or combine words, phrases, clauses, and sentences in a paragraph correctly and appropriately					
Enhance analytical abilities so that learners can find meanings, roles of sentences, and purposes of pieces of writing efficiently					
Choose appropriate words to create sentences and paragraphs correctly, appropriately and easily					
Others					

Part 5/2 Advantages of Using Content Matters in Sports Science as the Context for Study	Levels of Agreement				
	5	4	3	2	1
Learn both content matters and the English language at the same time					
Learn and develop writing skills from the contents they need in use in their everyday lives					
Enhance enthusiasm to learn language and make their English learning not boring					
Enhance analytical skills in academic and social contexts					
Encourage learners to use knowledge or anything they have learned to apply for use in their writing					
Know writing direction					
See how to use some grammatical items and how they are changed upon context					
Learn grammar accompanying with vocabulary, paragraph organization, communicative skills, and writing techniques at the same time					

Part 5/2 Advantages of Using Content Matters in Sports Science as the Context for Study	Levels of Agreement				
	5	4	3	2	1
Write sentences and a paragraph correctly based on the context and purposes of writing					
Others					

Part 5/3 Advantages of Web-Based Instruction	Levels of Agreement				
	5	4	3	2	1
Develop a learning network					
Emphasize learner centeredness					
Reduce gaps of time and distance					
Save expenses for learning and travelling. Learners can learn online lessons at home.					
Promote acquisition and make learning language not boring					
Learn English writing from several types of media, such as videos, slides, and other multimedia					
Do exercises and check answers immediately					
Exchange thoughts, discuss about problems in writing through social networking, like Facebook, weblog, and other media					
Learn English wring from authentic resources					
Others					

Part 6 Your opinions about some interesting lessons and activities which can be taught and used in the web-based course which aims to enhance your English grammatical competence and writing ability

………
………
………
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………

Thank You for Your Participation

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APPENDIX B

Interview Questions

Sports Science Students before Receiving the Treatment

1.In the English level 1 course, what types of writing: biographies, summarizing stories or any others do you have opportunities to write?

2. What levels of writing (sentence, paragraph, or essay levels) are you usually assigned to do?

3. What problems do you have in your pieces of writing, such as being unable to construct sentences, using incorrect sentence structures, writing meaningless sentences, using incorrect grammatical features, having spelling problems, etc.?

4. Do you think what factors have the effects on the quality of writing?

5. Do you think grammatical competence is important for the students' English writing ability? If yes, please answer question number six and seven. If no, you can skip to question number eight.

6. Do you think what English grammatical features: tenses, parts of speech, subject-verb agreement, and some others are important for English writing ability?

7. To what extent do you think explicit grammar explanation provided in meaningful context can help students write better?

8. Besides grammatical features, do you think there are any English language elements which are important for developing writing ability?

9. To what extent do you think using content matters derived from the students' interests as the context for teaching writing can help them write better?

10. Are there any subject matters in sports science that seem interesting to you and should be applied for use in teaching writing?

11. To what extent do you think web-based instruction can help develop English writing competence?

12. How long should the web-based course be open for students?

13. Do you think there are any interesting lessons and activities that should be included in the web-based course?

Interview Questions

People who Worked in the Fields of Sports Science

1. On the whole, how often do you use English in your occupation and everyday life?

2. Have you ever got any problems in using English in your occupation and everyday life?

3. Do you think English is necessary for your occupation in the fields of sports science? If yes, to what extent it is important for you?

4. What types of writing in the fields of sports science do you need to do in your occupation, like reports, meeting notes, etc.?

5. Have you ever got any writing problems in your occupation and everyday life? If yes, what problems are they (sentence structures, English grammar, spellings, etc.)?

6. How can you deal with rush problems when you have to write in English?

7. Do you think how necessary it is for sports science students to study English?

8. Do you think it is necessary for sports science students to develop their writing abilities? If yes, to what extent it is important for them?

9. Do you think teaching English grammar within meaningful context can help students write better? If yes, to what extent it can help them?

10. Do you think if students have opportunities to write in the topics of sports science, this can help them write better? If yes, to what extent it can help them?

11. What topics or subject matters in sports science do you usually apply for use in your occupation and everyday life? For example,

11.1 topics about types of sports, such as swimming, basketball, football, etc.,

11.2. general education for sports science, such as general aspects of sports science, general aspects of sports medicine, philosophy, ethics, and legal aspects of sports, etc.,

11.3. science and mathematics for sports science, such as basic physiology, basic anatomy, etc.,

11.4. and special subjects for professions in sports science, such as sports technology, motor learning, etc.

12. Do you have any suggestions for the course development which aims to help sports science students develop their writing ability?

Interview Questions

Chair of the English Program, Course Coordinator and English Instructors

1. What types of writing (biographies, summarizing stories, etc.) does the English level 1 which is open for first-year undergraduate sports science students focus on?

2. What level of writing (sentence, paragraph, or essay levels) are the students assigned to do?

3. What teaching techniques do you employ in teaching writing?

4. What types of problems do you usually find in the students' pieces of writing, such as being unable to construct sentences, using incorrect sentence structures, writing meaningless sentences, using incorrect grammatical features, having spelling problems, etc.?

5. How can you help your students correct their own pieces of writing and reduce writing errors? For example, you may provide them good pieces of writing as the example for them before they are assigned to write by themselves.

6. Do you think what factors have the effects on the quality of pieces of writing of your students?

7. To what extent do you think grammatical competence has effects to your students' writing ability? If yes, please answer question number eight and nine. If no, you can skip to question number ten.

8. Do you think what English grammatical features: tenses, parts of speech, subject-verb agreement, and some others are important for English writing ability?

9. To what extent do you think explicit grammar explanation provided in meaningful context can help students write better?

10. Besides English grammatical features, do you think there are any English language elements which are important for writing ability, such as paragraph organization?

11. To what extent do you think using content matters derived from the students' interests as the context for teaching writing can help them write better?

12. (Question for the Chair of the English Program) Are there any recent policies which aim at developing the English Level 1 course? What seems to be the direction of the course development?

13. (Question for the Course Coordinator) What teaching principles and strategies do you use for selecting lessons, activities, and course evaluation for English Level 1 course?

14. To what extent do you think learning from websites can help develop the students' language abilities, especially their writing ability?

15. How long should the web-based course be open for students?

16. Do you think there are any interesting lessons and activities that should be included in the web-based course?

Appendix C

Pre-test
Time Allotment: 1 hour
Part 1: Grammar
A. Read the following passage carefully and choose the best answer (a, b, c or d).

<u>A Balanced Diet</u>

In general, athletes have different 1)._____ needs from the rest of us. They need to be more aware of 2)._____ necessity of a well-balanced diet which 3)._____ the right amount of proteins, carbohydrates, fibers, vitamins, minerals and fats. This is because eating the right amount of food and having 4)._____ hydration before, during and after playing sports 5)._____ an effect on 6)._____ abilities in sports games. However, it doesn't mean that athletes from all 7)._____ of sports always 8)._____ the same proportion of food since 9)._____ amount of protein, carbohydrates and fats 10)._____ on the type of sports they play. If they play sports that 11)._____ strength and power, like weight training, they 12)._____ to increase 13)._____ protein intake from good sources, such as fish, chicken, red meat, eggs and nuts. As a matter of fact, protein 14)._____ in a wide range of sports, especially the body building fraternity. Regarding fats, people who 15)_____ in the sport that 16)._____ the right 17)._____ of athletes, like boxing, 18)._____ to reduce the amount of fats in their diet. Athletes in 19)._____ group usually eat small, regular portions and switch to low fat foods. As for carbohydrates 20)._____, they have to limit the amount of sugary carbohydrates but 21)._____ eating starches from sources, like wholegrain bread, rice, etc. Apart from the food groups given above, vitamins and minerals from fresh 22)._____ and vegetables 23)._____ important for their 24)._____ diet since they are vital for the 25)._____ system and aid with the recovery period.

1. a. nutrition   b. nutrient   c. nutritionally   d. nutritional
2. a. a   b. an   c. the   d. -
3. a. comprise   b. comprises   c. comprising   d. comprised
4. a. proper   b. properly   c. propering   d. propered
5. a. have   b. has   c. having   d. had
6. a. his   b. her   c. its   d. their
7. a. type   b. types   c. typing   d. typed
8. a. need   b. needs   c. needing   d. needed

9. a. a   b. an   c. the   d. -
10. a. depend   b. depends   c. depending   d. depended
11. a. emphasize b. emphasizes c. emphasizing d. emphasized
12. a. have   b. has   c. having   d. had
13. a. your   b. his   c. her   d. their
14. a. uses   b. use   c. is using   d. is used
15. a. participate b. participates c. participating d. participated
16. a. require   b. requires   c. requiring   d. required
17. a. weigh   b. weight   c. weightly   d. weighting
18. a. have   b. has   c. having   d. had
19. a. this   b. that   c. these   d. those
20. a. intake   b. intakes   c. intaking   d. intaken
21. a. keep   b. keeps   c. are keeping d. are kept
22. a. fruit   b. fruits   c. fruiting   d. fruited
23. a. is   b. are   c. be   d. been
24. a. well-balance   b. well-balances
    c. well-balancing   d. well-balanced
25. a. immune   b. immunes
    c. immunity   d. immunities

B. Read the following passage carefully and then specify which words or phrases in bold type are right and which are wrong. Put a tick ☑ in the box for the right items and mark a cross ☒ for the wrong ones. Finally, you must correct the wrong items on the space provided.

<u>Sport Management</u>

Sport management is a field of 1). **educational** and profession that focuses on the business aspects of sports, like the system of 2). **professional** sports, sports information, sport finance, event management, and 3). **facilitied** management. With respect to the career fields of sport management, there 4). **is** a variety of job titles that 5). **are related** to sport management, such as sporting goods sales 6). **representatives**, facility coordinators, athletic directors, compliance directors, fitness mangers, and athletic business managers. As for 7). **his** job responsibilities, it may vary depending on the types of organization, levels of management, and areas of 8). **a** sport industry. Mostly, people who 9). **works** in the field of sport management 10). **has** the duties, like accounting, ticketing, working in special 11). **event** promotions and sponsorships, or even developing a management plan to deal with current legal issues in sports. The sport manager, especially, 12). **involve** in facility and event management. In regards to 13). **the** salary ranges, jobs concerning sport management are often composed of basic salary plus commission. The average salaries based on the 1994 Team Marketing

Report 14). **had showed** that the vice president of marketing at the major league 15).

earn $114,444 followed by the director of marketing earning $76,785, for example.

1. ☐ ………………   2. ☐ ………………
3. ☐ ………………   4. ☐ ………………
5. ☐ ………………   6. ☐ ………………
7. ☐ ………………   8. ☐ ………………
9. ☐ ………………   10. ☐ ………………
11. ☐ ………………   12. ☐ ………………
13. ☐ ………………   14. ☐ ………………
15. ☐ ………………

Part 2: Paragraph Writing

Write a short paragraph by following the steps below.
1. Choose a sport of your own interest to write as a title of your paragraph.
2. Your paragraph needs to answer the following questions.
      a. What is the sport called in English?
      b. Is it a local, national or international sport?
      c. Where can you play it?
      d. Is it an indoor or outdoor sport?
      e. Is it a single or team sport?
      f. How many players are required in a game?
      g. What are the rules for playing it?
      h. Have you ever played it? If yes, where and how often do you play it?
      i. Do you know any famous players?
      j. Does it have any health benefits for you? If yes, what are they? If no, explain why it is bad for your health.

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Thank You

Post-test
Time Allotment: 1 hour
Part 1: Grammar
A. Read the following passage carefully and choose the best answer (a, b, c or d).

<u>Overweight</u>

Being overweight 1)._____ a condition of having more fat than 2)._____ body's needs. It 3)._____ by many factors, such as eating disorders, metabolic disorders, genetic predisposition, 4)._____ imbalances, alcoholism, limited physical exercise, psychotropic 5)._____, and stress. To determine whether or not a person is overweight, it 6). _____ by body mass index (BMI) which is a measure of a person's weight taking into account his 7)._____. To calculate 8). _____ body mass index, the formula states that BMI equals your weight (mass) in kilograms divided by 9). _____ square of your height in meters. If the result of the calculation 10). _____ the BMI of 25 or more, it means that you 11). _____ to be overweight. However, the degree of overweight by body mass index may vary among 12). _____ races. In the group of Asians, they 13). _____ overweight with 14). _____ BMI results between 23 and 29.9 while 15). _____ and blacks 16). _____ the BMI of 25 or more for being overweight. To lose weight and have a BMI of less than 25, many people 17). _____ to change 18). _____ lifestyles. One of 19). _____ recommended treatments 20). _____ a controlled diet. However, it was found that such 21). _____ method may have short-term 22). _____, and a person who 23). _____ this way often gains all of the lost weight back and more in the longer term which 24). _____ yo-yo dieting or weight cycling. Therefore, it is necessary to have physical exercise, long-term planning and weight 25). _____ in conjunction with the controlled diet.

1. a. be   b. is   c. are   d. being
2. a. its   b. his   c. her   d. your
3. a. cause   b. causes   c. is causing   d. is caused
4. a. hormone   b. hormones   c. hormonal   d. hormonally
5. a. medicine   b. medication   c. medical   d. medically
6. a. generally measure   b. generally measures
   c. is generally measuring   d. is generally measured
7. a. high   b. height   c. heightening   d. heightened
8. a. their   b. his   c. her   d. your
9. a. a   b. an   c. the   d. –

10.a. show   b. shows   c. is showing d. showed
11.a. consider   b. considers
   c. are considering   d. are considered
12. a. differ   b. differently   c. different   d. difference
13. a. can consider   b. can be considering
   c. can be considered   d. can have been considered
14. a. a   b. an   c. the   d. -
15. a. Hispanic   b. Hispanics   c. Hispanical   d. Hispanically
16. a. require   b. requires   c. are requiring d. are required
17. a. need   b. needs   c. are needing d. are needed
18. a. their   b. his   c. her   d. your
19. a. a   b. an   c. the   d. -
20. a. be   b. is   c. are   d. being
21. a. a   b. an   c. the   d. -
22. a. effect   b. effects   c. effective   d. effectively
23. a. prefer   b. prefers   c. is preferring d. is preferred
24. a. call   b. calls   c. is calling   d. is called
25. a. manage   b. manages   c. managed   d. management

B. Read the following passage carefully and then specify which words or phrases in bold type are right and which are wrong. Put a tick ☑in the box for the right items and mark a cross ☒for the wrong ones. Finally, you must correct the wrong items on the space provided.

<u>Olympic Games</u>

The Olympic Games are the world's foremost sports competition in which thousands of athletes 1). **participates** in a variety of competitions. 2). **Originated**, the Ancient Olympic Games were held in Olympia, Greece in 776 BC based on the inscriptions found in Olympia. The Ancient Olympic Games were a set of sports games which 3). **held** among representatives of many different city states and kingdoms from Ancient Greece. The Games featured 4). **the** variety of sports fights which were in combat and chariot racing events. With respect to 5). **his** name, it was Heracles, a son of Zeus, who first called the Games "Olympic" and founded the custom of holding the Games every four years, and 6). **this** period was known as an Olympiad. As for the Modern Olympic Games, after Baron Pierre de Coubertin founded the International Olympic Committee (IOC) in 1894, the IOC 7). **had become** the governing body of the Olympic Movement. The IOC has a duty to determine the sports to be contested at 8). **the** Games. After the contests, the 9). **one**, second and third place finishers in each game receive gold, silver, and bronze medals, respectively. The IOC is also responsible for selecting the host city for each time of the Olympic Games. 10). **The** host city has responsibilities for organizing and funding a celebration of the Games

which 11). **must approve** by the Olympic Charter. The 12). **celebrate** of the Games includes the opening and closing ceremonies as well as the Olympic flag and torch. As for the adjustments in the Games, since the 20th century, the IOC 13). **has had to** adapt to the varying political, economic, and technological realities. As a result, 14). **the** Olympics changed from having only amateurs in all 15). **type** of sports competitions to allow professional athletes to participate in the Games.

1. ☐ ………………   2. ☐ ………………
3. ☐ ………………   4. ☐ ………………
5. ☐ ………………   6. ☐ ………………
7. ☐ ………………   8. ☐ ………………
9. ☐ ………………   10. ☐ ………………
11. ☐ ………………   12. ☐ ………………
13. ☐ ………………   14. ☐ ………………
15. ☐ ………………

Part 2: Paragraph Writing
Write a short paragraph by following the steps below.
1. Create your own paragraph title.
2. Your paragraph needs to answer the following questions.

     a. Do you consider yourself overweight, underweight, obese or normal?
     b. How tall are you?
     c. How much do you weigh?
     d. If you are overweight or obese, do you have any weight loss ideas and what are they? If you are underweight, do you have any plans to gain weight and what are they? If your weight is normal, what methods do you use to control your weight?
     e. Do you consider yourself a fast eater, slow eater or moderate eater?
     f. How many meals a day do you usually have?
     g. Which food group (proteins, carbohydrates, fats, vitamins and minerals) do you usually have in the meals you eat?
     h. What is your favorite food? Do you think it is healthy or unhealthy?
     i. Do you have physical exercise, such as playing sports, working out at a gym or in a fitness center, etc.? If yes, how often do you have physical exercise and what are they? If not, what do you like to do in your free time?
     j. In your opinion, what is the best way to control your weight?

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Thank You

APPENDIX D

Attitude Questionnaire for Sports Science Students

Title: The Development of a Form-Focused Web-Based Instruction to Enhance the English Grammatical and Writing Competence of Thai Undergraduate Sports Science Students

Part 1   **Background Information and Development of Learners after Studying from the Form-Focused Web-Based Instruction (Provide true information)**

<u>Background Information</u>   Gender ☐ Female   ☐ Male   Age ☐

Year ☐   Semester ☐   Academic Year .... Field of Study......................

Degree ☐ High School Diploma   ☐ Vocational Degree   ☐ Others....................

<u>Background in the English Language</u>   I have studied English for ☐ years and ☐ months.

Grade in the English Subject from the Previous Semester...................

Writing Experience in the English Language   ☐ Yes   ☐ No

<u>Levels of Your English Grammatical Competence and Writing Ability after Studying from the Form-Focused Web-Based Instruction</u>

Please put a tick ☑ in the box that shows your English grammatical competence and writing ability after learning from the form-focused web-based instruction.

☐ 5 Excellent	Write fluently and efficiently. Be capable of using the language accurately and appropriately for purposes, content, and social context. Don't have problems in grammar and writing. Be able to check and revise one's own pieces of writing
☐ 4 Very Good	Write fluently, but still have few writing errors, such as selection of some words and grammatical features. Be able to write in the content that can cover the specified topic. Be able to check and revise one's own pieces of writing.
☐ 3 Good	Write fluently, but still have some writing errors. Sometimes make the readers confused with some information. Be able to check and revise one's own major errors. Have problems with paragraph organization, selection of words, grammatical features, and spelling.
☐ 2 Fair	Write fluently, but usually make the readers confused. Be able to check and revise one's own minor writing errors. Have problems with paragraph organization, selection of words, grammatical features, content, and spelling.
☐ 1 Poor	Unable to write by oneself and usually make the readers confused with one's own pieces of writing. Require examples of good pieces of writing. Use dictionaries all the time. Unable to check or revise one's own pieces of writing. Have problems with language structure. Unable to use the language appropriate for purposes of writing. Have problems with selection of words, paragraph organization, grammatical features, content, and spelling.

Frequency in Visiting Web-Based Course, Weblog, and Facebook

I visited the web-based course www.noiwebcourse.com.

☐ Everyday   ☐....Times a Week   ☐......Times a Month   ☐......Times a Year   ☐ Never

I posted questions and chatted on Facebook.

☐ Everyday   ☐....Times a Week   ☐......Times a Month   ☐......Times a Year   ☐ Never

I practiced writing on the weblog.

☐ Everyday   ☐....Times a Week   ☐......Times a Month   ☐......Times a Year   ☐ Never

Part 2   **Effectiveness and appropriateness of the Form-Focused Web-Based Instruction to Enhance English Grammatical Competence and Writing Ability**

Levels of Effectiveness   5 = Excellent

4 = Very Good

3 = Good

2 = Fair

1 = Requiring Some Improvement

Levels of Appropriateness   5 = Absolutely Appropriate

4 = Appropriate

3 = Neutral

2 = Inappropriate

1 = Absolutely Inappropriate

Instructions   Please put ticks ☑ in the boxes that show the levels of effectiveness and appropriateness of the form-focused web-based instruction to enhance English grammatical competence and writing ability.

Part 2/1 Web-Based Course www.noiwebcourse.com	Levels of Effectiveness					Levels of Appropriateness				
	5	4	3	2	1	5	4	3	2	1
Goal. By the end of the course, students will have developed the abilities to write with grammatically correct sentences in a paragraph level under the assigned topics.										
Objective 1. Students will have an overall understanding of the English grammatical features and structures necessary for writing.										

Part 2/1 Web-Based Course www.noiwebcourse.com	Levels of Effectiveness						Levels of Appropriateness				
	5	4	3	2	1		5	4	3	2	1
Objective 2. Students will be able to use the English grammatical features and structures to form a paragraph appropriately and accurately.											
Objective 3. Students will be able to write a well-organized and meaningful paragraph under the assigned topics.											
Objective 4. Students will be able to identify and correct English grammatical errors.											
Lesson 1. Types of Sports											
Lesson 2 Ethics and Legal in Sports											
Lesson 3. Sports Nutrition											
Lesson 4. Sports Equipment											
Lesson 5. Sports Marketing											
Lesson 6. General Aspects of Sports Science											
Lesson 7. Accidents and Medical Treatment											
Lesson 8. Sports Psychology											
Grammar Lesson 1. Types of Sentences											
Grammar Lesson 2. Determiners											
Grammar Lesson 3. Subject and Verb Agreement											
Grammar Lesson 4. Parts of Speech											
Grammar Lesson 5. Active and Passive Voice											
Grammar Lesson 6. Run-On Sentences and Fragments											
Grammar Lesson 7. Verb Tenses											
Grammar Lesson 8. Word Order											
Cloze 1. Outdoor Sports											
Cloze 2. Ethical Responsibilities of a Coach											
Cloze 3. Carbohydrates											
Cloze 4. Types of Sports Equipment											

Part 2/1 Web-Based Course www.noiwebcourse.com	Levels of Effectiveness						Levels of Appropriateness				
	5	4	3	2	1		5	4	3	2	1
Cloze 5. Definition of Sports Marketing											
Cloze 6. Sub disciplines in Sports Science											
Cloze 7. First Aid											
Cloze 8. Psychology and Team Controlling											
Error Recognition 1. Indoor Sports											
Error Recognition 2. Fair Play											
Error Recognition 3. Nutrients											
Error Recognition 4. A Ball											
Error Recognition 5. Jobs in Sports Management											
Error Recognition 6. Four Main Streams in Sports Science											
Error Recognition 7. Body Testing											
Error Recognition 8. Stress of Sportsmen during the Competition											
Video Presentation 1. Types of Sentences											
Video Presentation 2. Determiners											
Video Presentation 3. Subject and Verb Agreement											
Video Presentation 4. Parts of Speech											
Video Presentation 5. Active and Passive Voice											
Video Presentation 6. Run-On Sentences and Fragments											
Video Presentation 7. Verb Tenses											
Video Presentation 8. Word Order											
Internal Links											
External Links											
Links to Grammar Games											
Links to Writing Games											

Part 2/1 Web-Based Course www.noiwebcourse.com	Levels of Effectiveness						Levels of Appropriateness				
	5	4	3	2	1		5	4	3	2	1
Examples of Diary Writing											
Speed of the Web-Based Course											
Speed in Downloading Video Presentations											
Time for Learning with the Web-Based Course											
Places for Making an Internet Connection to Visit the Web-Based Course											
Colors, Graphics, Pictures, and Web Formation of the Web-Based Course											
Making a Contact with the Webmaster											
Others …………………………………											

Part 2/2 Weblog	Levels of Effectiveness						Levels of Appropriateness				
	5	4	3	2	1		5	4	3	2	1
Speed of the Weblog											
Typing Codes and Italic Letters											
Clicking on the "Send" Button											
Convenience in Viewing Your Own Writing Work											
Convenience in Viewing Your Peers' Writing Work											
Suggestions and Correction of Your Writing Work											
Time Taken Before Getting Answers and Suggestions											
Size and Clearness of Typing Letters											
Colors, Graphics, and Formations of Weblog											
Time For Learning through Weblog											
Places Available for Learning through Weblog											
Others…………………………………											

Part 2/3 Facebook	Levels of Effectiveness						Levels of Appropriateness				
	5	4	3	2	1		5	4	3	2	1
Speed of Facebook											
Making Connection with People											
Chatting											
Posting											
Receiving Answers and Suggestions											
Answers and Suggestions Received											
Time Taken Before Getting Answers and Suggestions											
Uploading Files											
Downloading Files											
Colors, Graphics, Games, and Formations											
Time for Using Facebook											
Places Available for Using Facebook											
Others …………………………………………											

Part 3

Attitudes of the Students toward their English Grammatical Competence and Writing Ability after Receiving the Treatment from the Form-Focused Web-Based Instruction

Levels of Competence   5 = Much Better

4 = Somewhat Better

3 = About the Same

2 = Somewhat Worse

1 = Much Worse

Instructions   Please put ticks ☑ in the boxes that show levels of competence.

Part 3/1 English Grammatical Features and Structures	Levels of Competence				
	5	4	3	2	1
Articles (a, an, the) and Determiners (this, that, these, those, my, her, his, our, their, your, its)					
Pronouns					
Adverbs					
Adjectives					
Nouns					

Part 3/1 English Grammatical Features and Structures	Levels of Competence				
	5	4	3	2	1
Verbs (modal verbs, auxiliary verbs, verbs)					
Verb Tenses					
Word Order					
Subject-Verb Agreements					
Passive Voice and Active Voice					
Types of Sentences (simple, compound, and complex sentences) and Clauses (dependent clauses and independent clauses)					
Run-on Sentences and Fragments					
Others					

Part 3/2 Writing Ability	Levels of Competence				
	5	4	3	2	1
Choose appropriate words to create sentences and paragraphs more correctly, appropriately, and easily.					
Use various grammatical items and sentence structure.					
Write meaningful sentences					
Arrange sentences to create a meaningful paragraph.					
Understand the roles of sentences and purposes of pieces of writing					
Check and correct your own writing errors.					
Reduce grammatical errors and other writing erroneous elements in your writing					
Feel confident in your own writing abilities and be able to add, omit, replace or combine words, phrases, clauses and sentences in a paragraph correctly and appropriately.					
Others					

Part 4   Suggestions and Expectations about the Future Development of the Web-Based Course

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Thank You for Your Participation

APPENDIX E

Interview Questions

Sports Science Students after Receiving the Treatment

1. On the whole, to what extent do you think learning from web-based instruction enhances your English grammatical and writing ability?

2. To what extent do you think the goal of the course "By the end of the course, students will have developed the abilities to write with grammatically correct sentences in a paragraph level under the assigned topics." is appropriate and effective for your learning?

3. To what extent do you think the course objectives (1) "Students will have an overall understanding of the English grammatical features and structures necessary for writing.," (2) "Students will be able to use the English grammatical features and structures to form a paragraph appropriately and accurately.," (3) "Students will be able to write a well-organized and meaningful paragraph under the assigned topics.," and (4) "Students will be able to identify and correct English grammatical errors." are appropriate and effective for your learning?

4. To what extent do you think the grammar lessons provided in the web-based course are appropriate and effective for your learning?

5. To what extent do you think the cloze and error recognition tests provided in the web-based course are appropriate and effective for your learning?

6. To what extent do you think the video presentations provided in the web-based course are appropriate and effective for your learning?

7. To what extent do you think the grammar game links are appropriate and effective for your learning?

8. To what extent do you think the writing game links are appropriate and effective for your learning?

9. To what extent do you think the examples of diary writing provided in the web-based course are appropriate and effective for your learning?

10. To what extent do you think the web speed as a whole and file downloading are appropriate and effective for your learning?

11. To what extent do you think the internal and external links, like linking to Facebook and weblog have good speed?

12. To what extent do you think the colors, graphics, pictures, and web organization are appropriate and effective for your learning?

13. On the whole, to what extent do you think practicing writing on the weblog helps you improve your writing competence?

14. To what extent do you think the characteristics of the weblog, like connection speed, typing codes before sending work, viewing your own pieces of writing as well as those of others, sizes and clearness of letters, colors, graphics, and web organization are appropriate and effective for your learning and contributes to the enhancement of your grammatical and writing competence?

15. To what extent do you think the suggestions, correction, and the period of time you had to wait before receiving the feedback on the weblog are appropriate and effective for your learning?

16. On the whole, to what extent do you think having discussions about the problems of your grammatical competence and writing ability on Facebook is appropriate and effective for you?

17. To what extent do you think the characteristics of Facebook, like connection speed, chatting, posting comments, uploading and downloading files are appropriate and effective for your learning and contributes to the enhancement of your grammatical competence and writing ability?

18. To what extent do you think the suggestions and responses given on Facebook as well as the period of time you needed to wait before getting the feedback are appropriate and effective for your learning?

APPENDIX F

Scoring Rubric for Writing Tests (50 Marks)

Criteria	Maximum Score
Punctuation: 10 marks	
The spelling is correct.	3
Capital letters are used correctly.	3
There is a period after every sentence.	2
Commas or other punctuation marks are used correctly	2
Content: 15 marks	
The paragraph fits the assignment and is relevant to the topic.	6
The paragraph is interesting to read.	3
The paragraph shows coherence (paragraph unity and sentence cohesion).	6
Paragraph Organization: 10 marks	
The paragraph begins with a topic sentence that has both a topic and a controlling idea.	3
The paragraph ends with an appropriate concluding sentence.	3
The paragraph contains several supporting sentences.	4
Grammar Rules and Usage: 15 marks	
Check for sentence fragments and run-on sentences.	5
Check for various types of sentence (simple and compound sentences).	5
Check for overall grammar and sentence structure (subject-verb agreement, verb tenses, articles, and pronoun agreement).	5

COA.No.2011/093.0205

Documentary Proof of The Committee for Research Ethics (Social Sciences)

Title of Project: The development of a Form-Focused Web-Based Instruction to Enhance the English Grammatical and Writing Competence of Thai Undergraduate Sports Science Students

Principal Investigator: Miss Thanawan Suthiwartnarueput

Name of Institution: Chulalongkorn University

Approval includes:
1) MU-SSIRB Submission form version received date 29 March 2011
2) Participant Information sheet for Interview version date 25 April 2011
3) Participant Information sheet for Questionnaire version date 25 April 2011
4) Informed Consent form version date 25 April 2011
5) Interview Guideline version received date 29 March 2011
6) Questionnaire version received date 29 March 2011

The Committee for Research Ethics (Social Sciences) is in full compliance with International Guidelines of Human Research Protection such as Declaration of Helsinki, The Belmont Report, CIOMS Guidelines and the International Conference on Harmonization in Good Clinical Practice (ICH-GCP)

Date of Approval: 02 May 2011

Date of Expiration: 01 May 2012

Signature of Chairman:...

(Emeritus Professor Santhat Sermsri)

Signature of Head of the Institute:...

(Assoc. Prof. Dr.Wariya Chinwanno)

Dean of Faculty of Social Sciences and Humanities

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BIOGRAPHY

Thanawan Suthiwartnarueput was born on December 5th, 1979 in Bangkok, Thailand. She graduated with a Master's Degree in Applied Linguistics from Mahidol University in 2004. She is currently an English teacher in the Faculty of Liberal Arts, Mahidol University. She teaches first-year students from the faculties of engineering, nursing, and sports science. Her areas of interest include e-learning, focus-on-forms and focus-on-form instruction, and learning strategies. She can be reached at noiloveshome@gmail.com or call 089-510-8973.