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開發一個國際貿易實務學習系統

The Development of an International Trade Practice
Learning System

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中華民國 101 年 6 月

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摘要

傳統國際貿易的教學方式是由教師透過上課時的投影片講解，搭配指派作業或其他教學方法進行教學。不幸的是，對於教師與學生而言，這些教學方法無法使得教師和學生之間有著良好且足夠的溝通。學習者在學習過程中，對於國際貿易的整個過程沒有一個完整的理解。為了解決這些問題，本研究開發一個國際貿易實務學習系統，此系統結合的國際貿易實務的兩個主要部分，分別為國際貿易流程知識學習和商務英語學習系統。本研究設計了許多有用的功能以加強本系統的價值。舉例來說，本研究創造了分類英文錯誤顏色註記系統。在系統開發完畢之後，使用問卷來評估本研究的系統。結果顯示，本研究的系統可以有效地提高學習者的國際貿易和商務英語知識。並且對於促進教學者與學習者之間的溝通，做出了一些貢獻。

關鍵詞：商務英語、分類英文錯誤顏色註記系統、國際貿易、國際貿易實務實習系統

The Development of an International Trade Practice Learning System

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Abstract

A traditional teaching method of international trade is that the teachers provide knowledge for learners by using the slides, giving an assignment or the other teaching methods. Unfortunately, those methods are lack of enough communication between teachers and learners and do not make the learners have a complete understanding of international trade process. To address these problems, we develop an international trade practice learning system that combines two major parts, international trade process and business English. We develop many useful functions to enhance the system. For instance, we develop the colorful annotation system to classify the common errors in English usage. We use the questionnaires to assess the system. The result shows that the system contributes to the communication between teachers and learners and the learners can effectively improve their knowledge that both of international trade and business English.

Keywords : business English, colorful annotation system, international trade, international trade training system.

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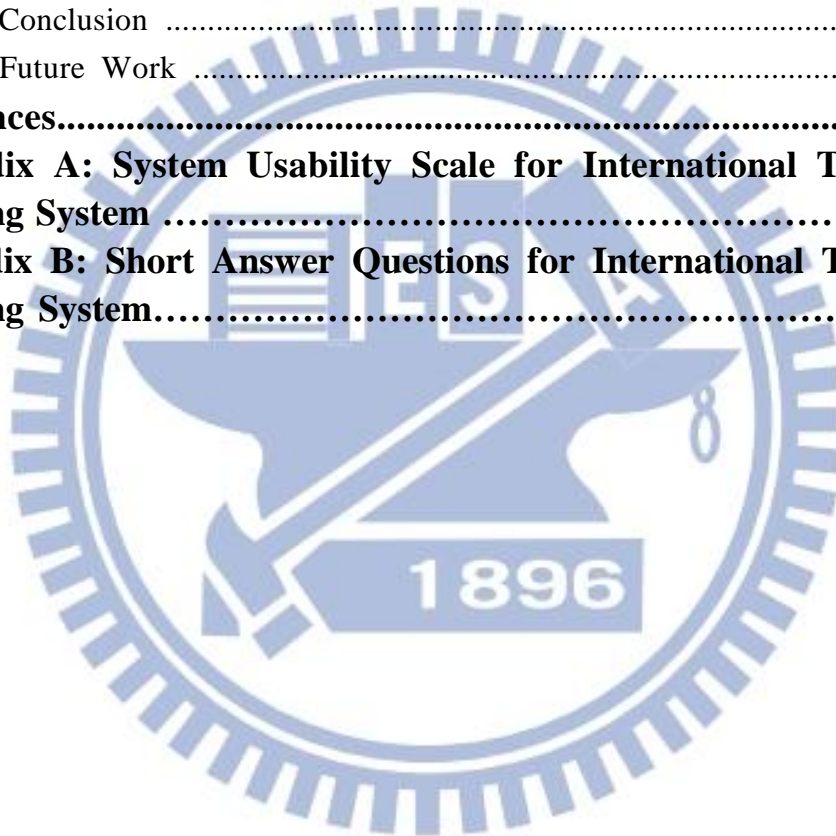
同時，謝謝實驗室的永威學長、家鋒學長、川彥學長、智維學長、文峰學長、瑞廷學長、俊傑學長，在我研究的過程中，總是給予我最好的幫助。而實驗室的碩班同學：冠穎、珮瑜、聖凱，和學弟們在研究的過程中所給予諸多的指教及鼓勵，最重要的是，有你們的存在，實驗室才能如此充滿歡樂的氣氛，讓研究不再那麼辛苦。

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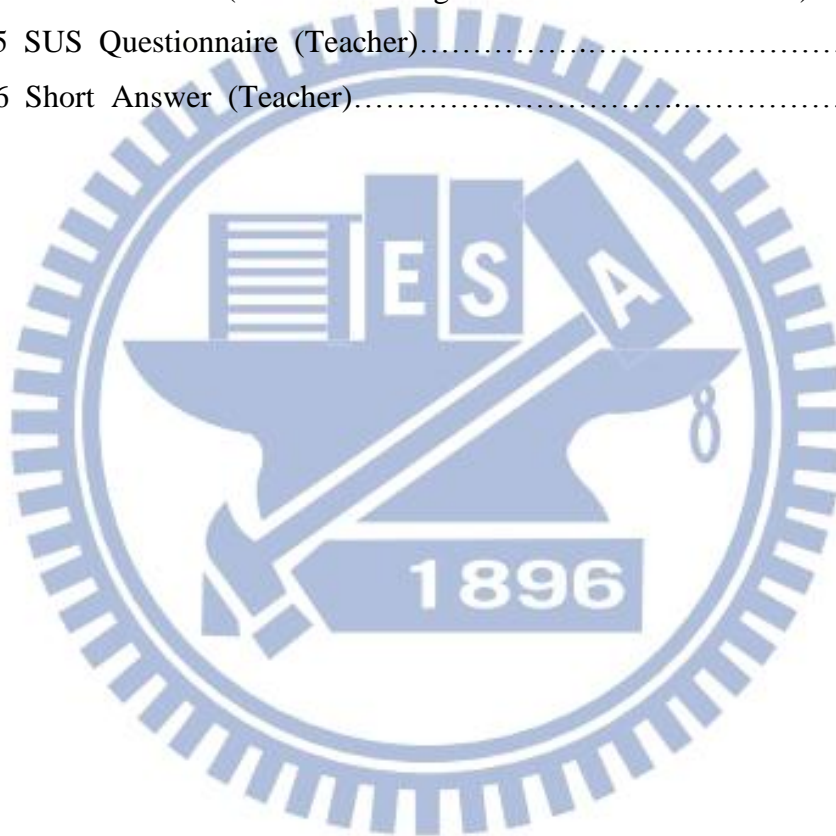


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1 Introduction

1.1 Motivation

Because portable Internet devices become lighter and cheaper, Internet connection bandwidths increase continually. There are more and more resources on Internet. Users can use the laptop, desktop computer and Tablet PC to learn knowledge from the Internet. According to a report published by Taiwan Network Information Center on January 2011, there are about 17 million Taiwanese who had gone on the Internet. It means that about 75.69% of Taiwanese had gone on the Internet.

Because the popularity of the Internet, it becomes more important to use the Internet to teach and learn. Teachers try to use the Learning Management System (LMS) and Learning Content Management System (LCMS) to find the better teaching method. Robinson and Schaible [1] bring up the idea about teaching collaboratively. When they teach a subject or design the activities of learning, they will discuss and share their experience of teaching. It is very common that the teachers use the Internet to teach [2]. Because the online class has become more common on campuses, many researchers try to find innovative ways to meet the needs of the new kind of learner—one no longer limited by face-to-face conferencing [3], [4], [5], and [6].

A traditional teaching method of international trade is that the teachers provide knowledge for learners by using the slides, giving an assignment or other teaching methods. The learners may be divided into different groups. Each group is regarded as the trading company. The members of each group discuss and prepare the report together. Those learning methods cannot

let the learners understand the international trade process completely. The learner just can comprehend part of the international trade process.

Some institutions and colleges build international trade laboratories to help the learners catch on to the knowledge of international trade. These laboratories consist of customhouse, forwarder, custom broker, bank and other institutions that are related to international trade. This teaching method is better than traditional teaching method, but it still has some disadvantages. It costs too much money to build one laboratory.

Some institutions and colleges also use the advantages of Internet to help them teach the learners. They build an E-learning system and put some teaching videos and slides on the system. The learners can watch the teaching videos everywhere and all the time. They also can download the slides and study them. They even can submit the homework through the system. It looks good, but this teaching method is similar to the traditional teaching method. It just lets the learners study the knowledge of international trade conveniently. If the teachers want to help the learners practice the process of the international trade, they still have to build the international trade laboratory.

1.2 Objectives

Darcy DiNucci [7] proposed the term “Web 2.0” that has the following features: information sharing, interoperability, user-centered design, and collaboration. In Web 2.0, the flow of the information changes from unidirectional to bidirectional. In recent years, Web 2.0 has made use of e-learning. This application calls e-learning 2.0 [8].

In this international trade practice learning system, we use the advantages of Web 2.0 to create it. This system must let the learners understand the process of international trade. The

learners can practice writing English business letters. The learners can comprehend the rules of English business letters and get their hands on the process of international trade in this system.

This system must not only help the learners but also help the teachers. In this system, the teachers should have the learning status of the learners well in hand. The teacher also can correct the English business letters easily. Moreover, this system must be user-friendly.

The most important thing is that the system needs a good communication platform. A good communication platform is a useful tool not only for engaging students in active learning during the lecture hour but also for enhancing the overall communication within the classroom [9].

1.3 Outline of the thesis

In chapter 2, we discuss the background of E-learning 2.0, the relationship between annotation and learning, computer-supported collaborative learning and related works. In chapter 3, we show a diagram of system overview and describe implementation details of some important components in international trade practice learning system. Next, chapter 4 presents the results of the international trade practice learning system and its operations. The evaluation is in chapter 5 containing a comparison and an experiment for international trade practice learning system. Finally, the conclusion and future work for my proposed module are presented in chapter 6.

2 Backgrounds

The purpose of the study was to develop an e-learning system that integrates with the related work to practice English business letter-writing for international trade processes.

2.1 E-learning 2.0

Martin Ebner brought up e-Learning 2.0 = f (e-Learning 1.0, Web 2.0, human factor.) [10]. The formula shows that the successful e-Learning 2.0 must consist of the users who shared “content” over the Web (web 2.0), the learning material is accessible via a learning management system (e-Learning 1.0) and the idea of Web 2.0 must be brought to the teacher as well as to the learners (human factor).

E-learning 1.0 is different from traditional learning methods. Learners can learn everywhere and all the time in an e-learning system [11]. Many studies show that e-learning makes more positive effects than traditional face-to-face learning [12], [13]. E-learning 1.0 makes more interaction between the learner and the computer. With the help of e-learning 1.0, many different teaching methods are added to the traditional learning material, such as animations, computer games and other computer-supported collaborative teaching methods. It leads to a positive effect on learning, because motivation of students was influenced positively [14], [15].

Web 2.0 was first invented by Tim O Reilly in 2004 [16]. There are some summary of Web 2.0, such as trusting users as co-developers, harnessing collective intelligence, leveraging the long tail through customer self-service and so on. “The user is the content” is the slogan of the so called Read/Write Web. Bryan Alexander and Alan Levine [17] point out that there are two features of Web 2.0, microcontent and social media. Cuene [18] distinguished between Web 1.0

and Web 2.0 from the user 's perspective: Web 1.0 consists of static web pages, and then Web 2.0 refers to shared “content ” by users over the Web. The human – computer interaction has changed from Web 1.0 to Web 2.0. In Web 1.0, users just read the web pages, but users write and contribute the articles in Web 2.0.

With the contribution of users grows up, ‘collective intelligence’, and re-usable dynamic content also increased. Such engagement with content builds up a sense of community, empowerment and ownership for users. When the right kind of systems and tools are available, there are several examples of amateur knowledge surpassing professionals. Of these, Wikipedia (<http://wikipedia.org>) is certainly the most recognized instance [19], [20].

Web 2.0 encourages the users to make more interaction with other users, a feature that is considered the fundamental of e-learning in many theorists [21]. Interaction encourages deeper and more active learning engagement, builds communities of learning and enables feedback from teachers to learners [22]. In recent years, associations have been reported between teacher–learner interaction in online learning and raised levels of student motivation [23], [24].

There are many representative applications of Web 2.0, such as Weblogs. On December 17, 1997, Jorn Barger started to post the articles to his Robot Wisdom Weblog [25], [26] and [27]. Weblog refers to a web site that is a “log of the Web”, indicating a record that points to material available on the World Wide Web [28]. On the other hand, Weblog is also regarded as a personal journal published on the World Wide Web and presented in reverse chronological order.

Stephen Downes [29], who used the perception e-Learning 2.0 for the first time, mentioned in his article “For all this technology, what is important to recognize is that the emergence of the Web 2.0 is not a technological revolution; it is a social revolution”. E-Learning 2.0 uses the power of the social network to help learners learn. The most important thing to a social network is a community of practice, articulated and promoted by people. According to Etienne Wenger

[30], a community of practice is characterized by “a shared domain of interest” where “members interact and learn together” and “develop a shared repertoire of resources”.

We not only use E-learning 2.0 to help the tutors teach but also need to find a good way to assess the E-learning 2.0 system. To determine the successful factors, an E-learning 2.0 system was designed for users to share information, collaborate with others, and obtain feedback. The factors driving a system success are drawn from the areas of interactive learning, cooperative learning, computer-mediated communication and on-line discussion boards [31].

2.2 Annotation and learning

Annotation means that somebody adds a comment in the origin content to help him remember or realize something [32]. Ovsianikov, Arbib & Mcneill [33] stated three ways in which annotation increases learning efficiency: it promotes memorization, thinking and clarification. Thus, web-based annotation tools may increase online learning performance. Ovsianikov, Arbib & Mcneill also brought up that online annotations involve four major functions: remembering, thinking, clarifying, and sharing. Since annotations involve those four major functions, annotation systems can take the advantages of electronic database and networked technologies to provide EFL (English as a Foreign Language) teachers and learners a more constructive environment for error correction and feedback.

Mihál and Bieliková think that the students who use the annotation as the learning assistance can help students learn better [34]. They think that the annotation is just like the context-based communication between the teacher and the students. Marshall [35] divides the types of annotation into 2 types, inexplicit and explicit. Explicit annotations (such as text) convey more meanings than inexplicit ones (such as using highlight, underline, asterisk, arrow, and graphics). Annotations are the notes a reader makes to himself, such as notes that the students make when

reading texts or researchers create when noting references they plan to further investigate. Online annotations offer more opportunities for learners to learn through conversations than paper-based annotations shared merely through printed technology [36].

Barger, Gupta, Sanocki, and Grudin brought up that annotations can provide in-context personal notes and can enable asynchronous collaboration among groups of users [37]. With the help of online annotations, users are free to add and share commentaries and no longer limited to viewing content passively on the Web.

Before we began to design the colorful annotation system, we referred to every kind of annotation systems. James R. Davis and Daniel P. Huttenlocher brought up an annotation systems that called CoNote [38]. CoNote enables a group of people to communicate via shared annotations on a set of electronic documents. Stephen J. H. Yang [39] proposed a personalized annotation management system that keeps track of seven types of annotations in that system; they are question, explanation, commentary, bookmark, sketch, drawing, and link. Annotators can choose one of them to distinguish their annotation. Petri Nokelainen, Jaakko Kurhila, Miikka Miettinen, Patrik Floréen and Henry Tirri [40] brought up a shared document-based annotation tool, EDUCOSM. The usefulness of the system is empirically evaluated in a real-life collaborative learning context.

2.3 Computer-supported collaborative learning

Computer-supported collaborative learning is the learning method that combines with cooperative learning and collaborative learning. This method is the long distance teaching by computer and network [41]. The difference between cooperative learning and collaborative learning is that cooperative learning is an approach to divide one task into many small parts.

Everyone completes a part of the task. Collaborative learning is an approach that all the members together complete a task [42].

The concept of collaborative learning looks like Wikinomics [43]. Many companies get huge success by the technology of mass collaboration (also called peer production) and open source, such as My Space, YouTube, Linux and Wikipedia. The general ideas about collaborative learning are Openness, Peering, Sharing and Acting Globally. Those companies get success quickly by making a part of technology open to public access or use, collaboration and sharing. Collaborative learning puts a stress on opening, collaboration, sharing and using the technology of open source code.

The environment of collaborative learning means that there the number of students and their teachers try to find the solution for some tasks and problems in the case of synchronized and interact with each other. Chiu, Wen and Sheng had ever tried to divide the learners into many teams and use the social activity to improve the efficiency of the learning [44]. Benbunan-Fich and Hiltz [45] spent three years finding the effective learning mediator from traditional face-to-face learning, totally online via asynchronous learning, and hybrid learning. They designed some experiments to find the effective learning mediator from seventeen different college courses. The conclusion is that if the students use the learning methods such as group learning, collaborative learning and raising a question constantly, then they will get the best learning efficiency.

There are many examples about using Web 2.0 for cooperative learning, such as Elia, Margherita, Taurino and Damiani combine CMS (Content Management System) - Drupal (web2.0 platform) with cooperative learning [46]. Drupal uses the idea of collaborative learning, tutors (super peers) publish the information of the assignment on the platform and learners (peers) cooperate to finish the assignment (wiki).

Franceschi, Lee. and Hinds [47] used VW (Virtual world) that was presented by Bartle [48] to explain that if the system designer could offer a user-friendly environment for the users, make the users familiarize themselves with the system and let the users be pleased to use the system, then group learning could let the learners get the better learning efficiency.

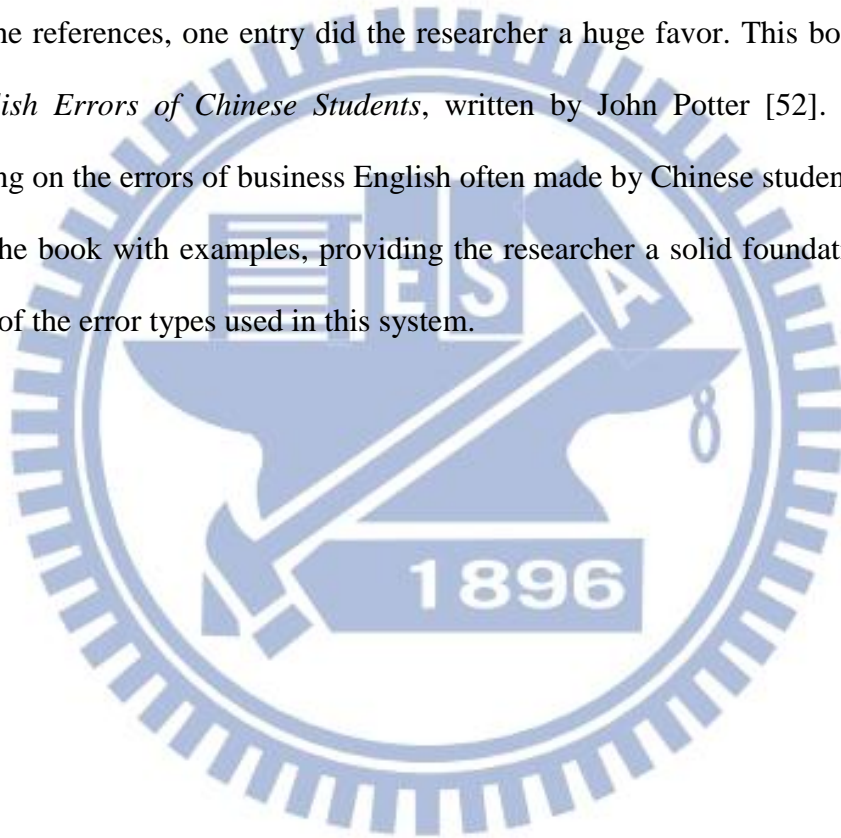
2.4 Common errors in English usage

Because the system is a web-based learning system with an annotation system, we referred to many studies to design the colorful annotation system to classify the common errors in English usage. For example, the “Online Annotator for EFL Writing System” had been developed by Yeh, S. W., Lo, J. J. and Huang, J. J. [49]. This system reformed traditional paper-based error feedback, error correction in the form of interactive error feedback and error analysis. The learners write an English composition through the system and the tutors correct the composition through the system. This study divided errors of English writing into 5 major types and then each type subdivided into some exact types. The amount of errors types of English writing is 48. This method presented by this study could classify the English errors effectively.

The system focuses on the learning of business English, especially the writing of English business letters. There are a little difference between English business letter writing and general English writing, such as the architecture and rules. For classifying the errors of business English, we referred to the other study. The study in the “Computer-aided error analysis” also helps us to classify the common errors in English usage [50]. They used standard text retrieval software tools to analyze error-tagged corpus, listed of all kind of English errors and error counts can be obtained in a little while. This study divided errors of English writing into 7 major types and then each type subdivided into some exact types.

To Chinese, English is a foreign language. About learning foreign language, we also studied the research presented by Kubota, Mariko [51]. “Error Correction Strategies Used by Learners of Japanese When Revising a Writing Task” is the research about Australia students who learns Japanese language. Although this study is not about learning English, it is still useful. In the paper, they also tried to classify the errors of Japanese language. The method of classification helps me find the way to create the rules of classification for my research.

Among the references, one entry did the researcher a huge favor. This book was, *Common Business English Errors of Chinese Students*, written by John Potter [52]. It consists of 14 chapters. Basing on the errors of business English often made by Chinese students in Hong Kong, Potter edited the book with examples, providing the researcher a solid foundation for setting up the categories of the error types used in this system.



3 System Design and Implementation

3.1 System concept and architecture

We had developed a system that has been based upon the following ideas. Firstly, the system needs a good communication platform. A good communication platform is a useful tool not only makes the students be in active learning during the lecture hour but also enhances the overall communication of the classroom. Secondly, the learners' major difficulty in error correction lies in their failure to detect errors rather than the lack of knowledge. Also, the learners have limited understanding of grammatical terms commonly used in a correction code, and that they correct surface errors better than meaning errors [53]. So we need an ideal annotation system that not only helps the learners easily detect and recognize the errors of business letters but also lets the teachers conveniently use. Thirdly, the system is an international trade practice learning system. So we need to create an environment as similar as the international trade process of the real world. Finally, we need to design many useful and user-friendly functions for the teachers and learners.

Fig. 3-1 displays the system architecture. The general administration department is the supremacy role in the system. These roles manage all the things in the system. There are many different departments in the system, such as the Trade Company, Bank, Customs and so on. we try our best to create the world that is as real as possible. We hope that learners can effectively learn international trade in the system.

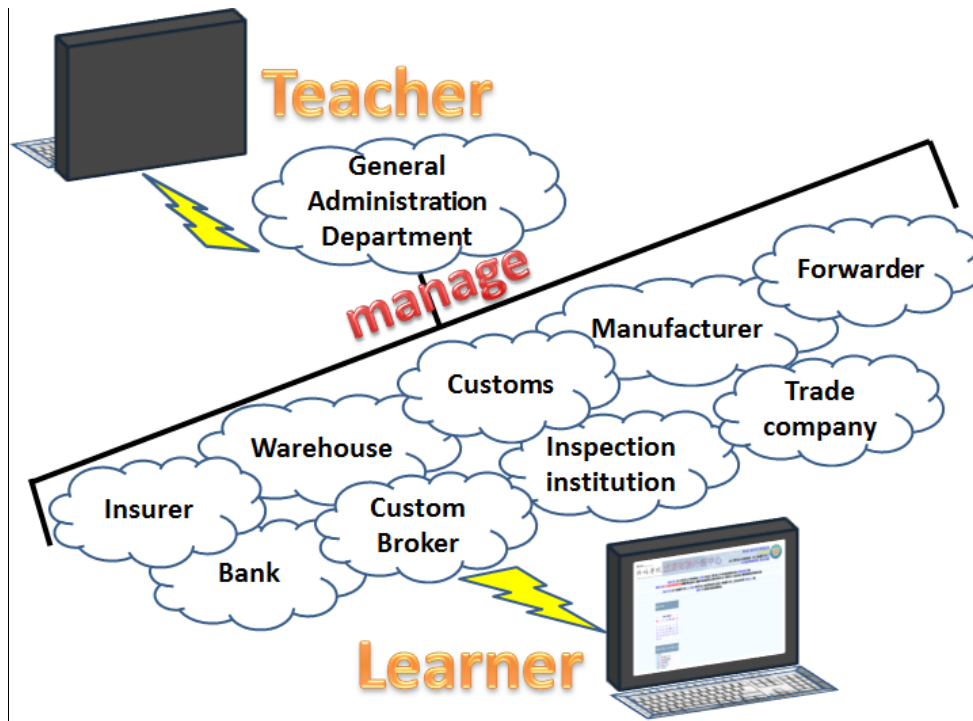


Figure 3-1 System architecture

3.2 Communication Mechanism

Writing business letters plays an important role in the international trade process of the real world. It is necessary for learners to understand how to write the correct business letters. The system offers the platform for learners to write the business letters and discuss with the teachers and the other learners.

In the system, we divide the learners into different teams and every team represents an international trade company. Every learner has to try his best to make a deal. They not only focus on their own business but also have to help their teammates. Besides, we have a special rule which states that the members in the same team can read their teammate's business letters. With this special rule, we believe that the teachers and the learners have effective communication and the learners can help their teammates.

Fig. 3-2 shows the process of the business letter writing.

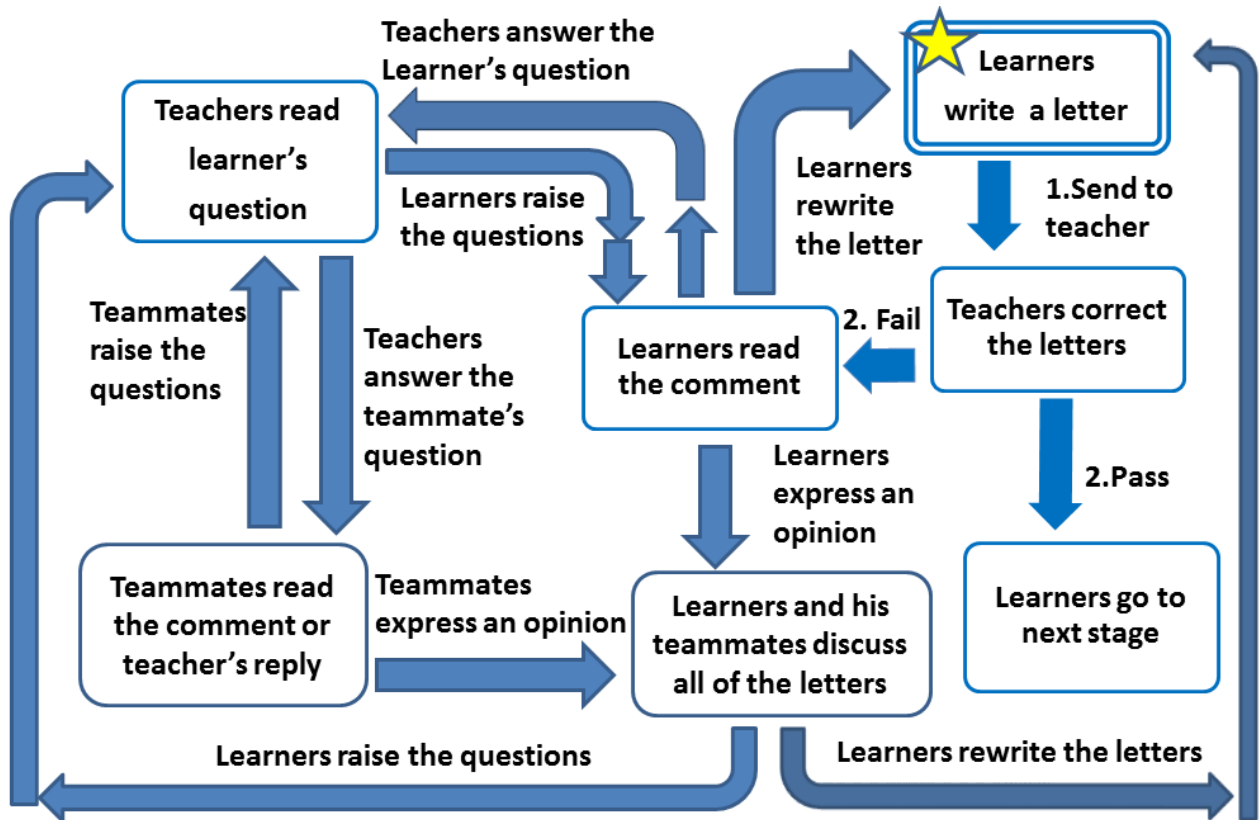


Figure 3-2: The Process of the Business Letter Writing

As shown in Fig. 3-2, the learners write the letter and submit it. Then, the teachers correct the letter. After the learners read the teacher's comment, they can raise questions. The teachers will answer the questions until the learners do not have the questions any more. The other learners in the same team can also read this letter even though they are not the writer of the letter. Then, the other learners also can raise questions or express their opinions. The teachers will also answer the questions until the other learners do not have questions. Finally, all the learners in the same team can discuss the comments and content of this letter until they get the answer that they want to know.

Add comment

title

account

student's reply **Can you understand the teacher's comment?**

I can't. I want to raise the question.
 Yes. But I have the other question.
 Maybe I can. I will try to realize it.
 Yes. I totally understand.

content

Figure 3-3: Student's reply

This system uses the checkbox to classify the type of comment. As shown in Fig. 3-3, there are four checkboxes in the area that are surrounded with a red box. The options are “I can't. I want to raise the question.”, “Yes. But I have the other question.”, “Maybe I can. I will try to realize it.” and “Yes. I totally understand.”.

The options “I can't. I want to raise the question.” and “Yes. But I have the other question.” are used to raise the questions to the teachers. The options “Maybe I can. I will try to realize it.” and “Yes. I totally understand.” are used to express an opinion to the teammates.

If the learners select the first two options to add the comment, the system will notify the teachers. However, if the learners select the last two options to add the comment, the system will not notify the teachers.

Those options are not only used to classify the type of comment. They also can help us observe the teachers. After the teachers add the comment, the system will take down the account of the teacher who takes responsibility to correct the letter. If we detect that many learners select the option “I can't. I want to raise the question.” and raise a question, the system will try to find who takes responsibility to correct those letters. Then, the system will notify the teachers who take responsibility to correct those letters. They should try the other way to add the comment on the letters. Of course, the system does not let the teacher know who selects the option “I can't. I want to raise the question.” and raise the question. We believe that this mechanism can improve the quality of communication.

If any learner raises a question, the system will notify the teachers. As shown in Fig. 3-4, there is the notice in the area that surrounded with a red box.



Figure 3-4: Raise a question

In addition to improving the quality of communication, the instantaneousness and convenience of the system also play an important role. After the learners ask the question, the system will notify the teachers immediately and request the teachers to answer the question. As shown in Fig. 3-4, there is some learner's information in the area that surrounded with a red box. The area is a hyperlink. The teacher can go to the page to answer the learner's question by clicking this hyperlink.

After the teachers answer the question, the system will notify the learners immediately. As shown in Fig. 3-5, there is some information in the area that surrounded with a red box. The area is also a hyperlink. The learners can go to the page that contains the teacher's reply.



Figure 3-5: Get the answer

As shown in Fig. 3-6, we can see the learner's question, the teacher's reply and the teammate's comment.



Figure 3-6: Communication

In this system, we not only focus on the communication between the teachers and the learners. We also make an effort to enhance the communication of the learners among themselves.

Every learner can raise a question to the same letter, even if the learner is not the author of the letter. The learners can also discuss the question with one another on the same page and bring up their opinions.

The value of the letter is not only decided by the communication between the teachers and the learners. The communication among the learners is also very important. The learners not only learn the knowledge from the teachers but also learn something from the communication among the learners.

3.3 Colorful Annotation System

In the system, we design a colorful annotation system to help the teacher classify the common errors in English usage. This system not only helps the teacher conveniently correct the learner's letter but also helps the learner easily detect errors.

The relationship between colors and the common errors in English usage

一致性 (Agreement)	片語動詞 (Phrasal Verbs)	關係子句連接概念 (Relative clause)
引起歧義 (Ambiguous)	字詞順序 (Word order)	不必要的重複 (Unnecessary repetition)
動詞時態 (Verb Tenses)	雙動詞 (Verb plus Verb)	條件句與假設語氣 (Conditional)
標點符號 (Punctuation)	主動與被動 (Active and Passive)	八大詞類的錯誤 (Parts of Speech)
介系詞 (Preposition)	單/複數名詞 (Singular and Plural)	連接詞/片語連接詞 (Linking words and phrases)
冠詞(Articles)	轉述句 (Reported Speech)	可數與不可數名詞 (Countable/Uncountable Nouns)
拼字(Spelling)	漏字 (Missing words)	其他常見英文使用錯誤 (Others)

Figure 3-7: Colorful Annotation System

As shown in Fig. 3-7, there are 21 kinds of common errors in English usage with different colors. At the bottom of Fig. 3-7, there are one button with the white cross and another 21 buttons with a Chinese character each on the keys. These buttons with Chinese characters represent the common errors in English usage. For example, when we move the mouse on the button with “可”, we will see the label of the button that means “可數與不可數名詞(Countable/Uncountable Nouns)”. The button with the white cross is used to add the comment. As we press the button, we will see the dialog as Fig. 3-8.



Figure 3-8: Adding the comment

The teachers can use this dialog to add the comment. If they press the button that is used to represent the common errors in English usage and press the button with the white cross to add the comment. They will see the appearance as shown in Fig. 3-9.

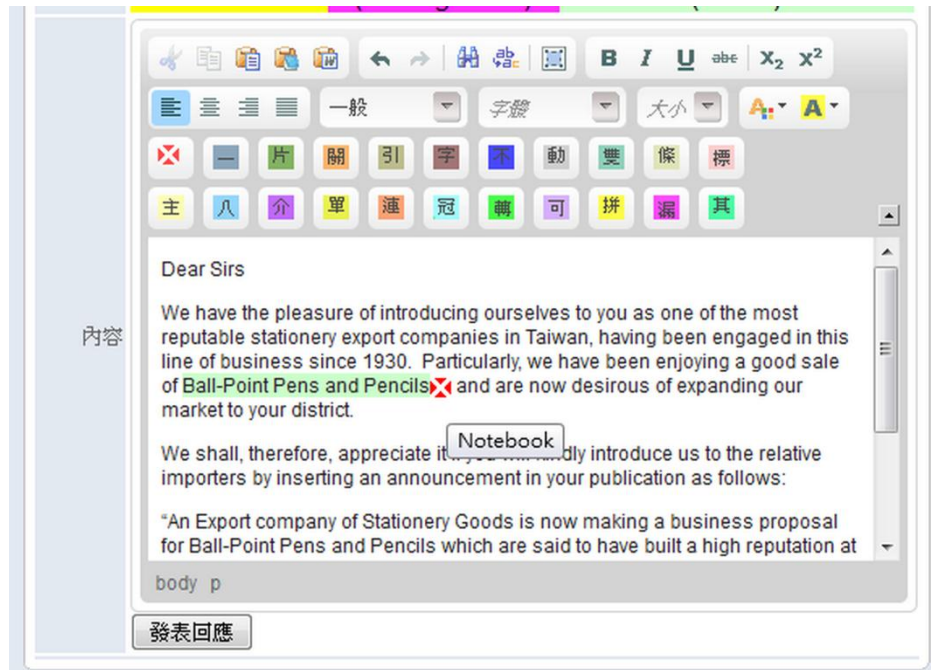


Figure 3-9: Teacher corrects the letter

In Fig. 3-9, we can find that the background color of the noun phrase “Ball-Point Pens and Pencils” turns to light green and there is a red box with a white cross after this sentence. When we move the mouse on the red box, we will see the label of the pattern “Notebook”. The word “Notebook” is the comment added by the teacher.

This system also helps the learners learn. As shown in Fig. 3-10, the learners can easily find where the errors are.

teacher1 於 2011-10-07 01:03:32 回應

Dear Sirs

We have the pleasure of introducing ourselves to you as one of the most reputable stationery export companies in Taiwan, having been engaged in this line of business since 1930. Particularly, we have been enjoying a good sale of Ball-Point Pens and Pencils✘ and are now desirous of expanding our market to your district.

We shall Notebook appreciate it if you will kindly introduce us to the relative importers by inserting an announcement in your publication as follows:

“An Export company of Stationery Goods is now making a business proposal for Ball-Point Pens and Pencils which are said to have built a high reputation at home and abroad. Contact them by addressing your letter to...”

Expenses, if any, will be gladly paid by us on request.

Your close cooperation with us in this matter will be appreciated.

Faithfully yours

Re:(1) 推銷信函

錯誤分析色碼對照

一 一致性 (Agreement)	片 片語動詞 (Phrasal Verbs)	關 關係子句連接概念 (Relative clause)
引 引起歧義 (Ambiguous)	字 字詞順序 (Word order)	不 不必要的重複 (Unnecessary repetition)
動 動詞時態 (Verb Tenses)	雙 雙動詞 (Verb plus Verb)	條 條件句與假設語氣 (Conditional)
標 標點符號 (Punctuation)	主 主動與被動 (Active and Passive)	八 八大詞類的錯誤 (Parts of Speech)

Figure 3-10: Learner's page

For instance, when the learners read the comment, the system offers an explanation about the relationship between colors and the common errors in English usage on the same page. If the learners cannot realize the meanings of the common errors in English usage, the system prepares a hyperlink to explain what the meanings of the errors are. These hyperlinks combine with explanations about the relationships between colors and the common errors in English usage. If

the learners hit the hyperlink, they will see the learning site about the different common errors in English usage, just as shown in Fig. 3-11.

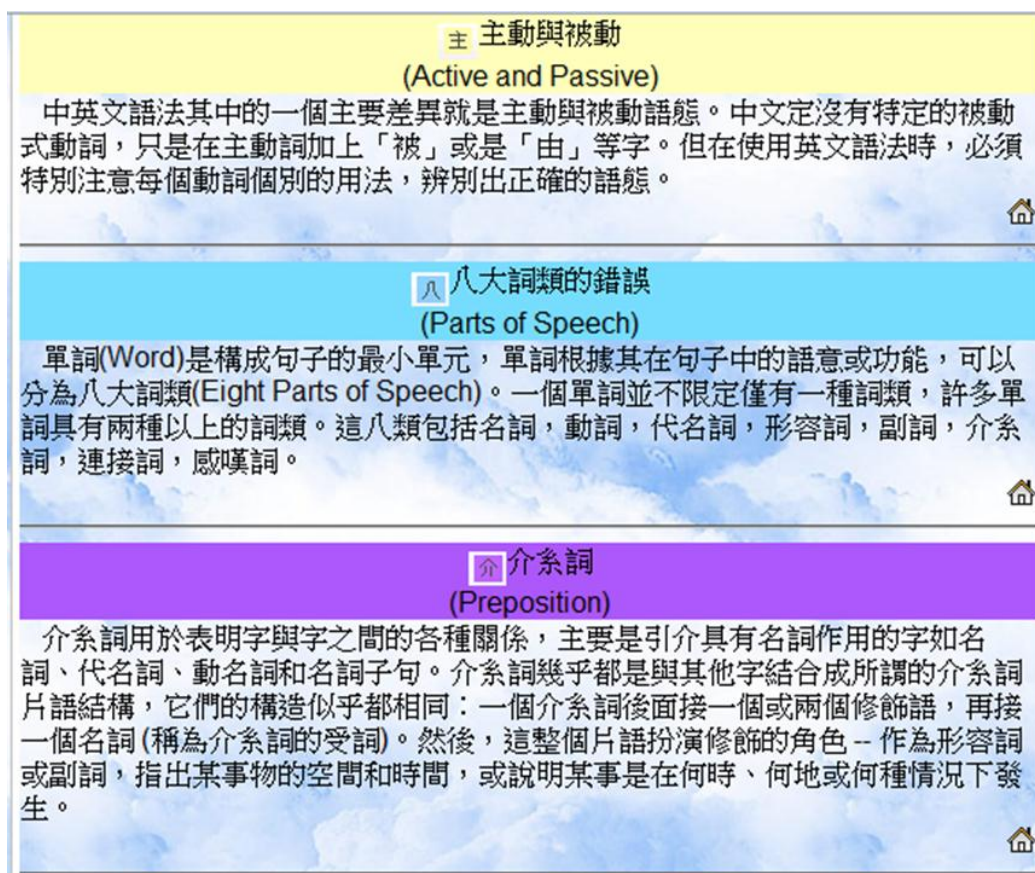


Figure 3-11: The Explanations of Common Errors

These explanations help clarify some basic grammatical concepts for the students to ponder. If they still have any doubt about the explanations, they may ask their teachers about them in their communication with the teachers.

3.4 Learning Assistant

We know that many learners do not major in international trade, so we design many assistant tools for the learners. For example, we use the picture to explain the meaning of each step and the major task of the step. As shown in Fig. 3-12, the picture shows that the major task and meaning of the twenty-eighth step.

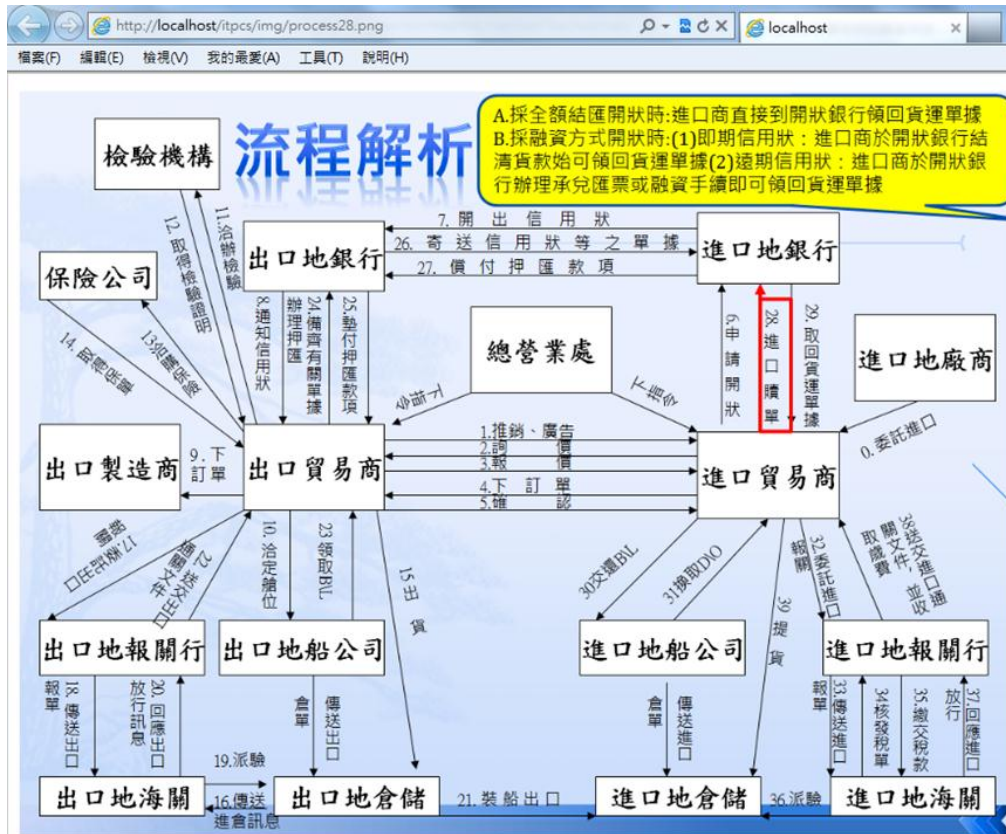


Figure 3-12: The explanation of step

This design can help the learners understand the meaning of the step and realize what role the step plays in the international trade process completely.

請先選擇您想瀏覽哪位老師的教學文件

教師列表:

所有範本列表 [範本步驟圖文對照](#)

(01) 推銷信函	(02) 詢價信函	(03) 報價信函	(04) 下訂單信函	(05) 訂單確認信函
(06) 申請開狀信函	(07) 開出信用狀	(08) 通知信用狀	(09) 訂單信函	(10) 洽定艙位信函
(11) 洽辦檢驗信函	(12) 檢驗證明	(13) 洽購保險信函	(14) 保險單	(15) 通知出貨信函
(16) 傳送進倉訊息	(17) 委託出口報關信函	(18) 出口報單	(19) 派驗	(20) 出口放行訊息
(21) 裝船出口	(22) 出口通關文件	(23) 運送單據	(24) 辦理押匯函	(25) 墊付押匯款項
(26) 信用狀等之單據	(27) 償付押匯款項	(28) 進口賒單	(29) 貨運單據	(30) 海運提單
(31) 提貨單	(32) 委託進口報關信函	(33) 進口報單	(34) 核發稅單	(35) 繳交稅款
(36) 派驗	(37) 進口放行	(38) 進口通關文件	(39) 提貨	(40) 其他參考資料

(01) 推銷信函

Figure 3-13: File Room

As shown in Fig. 3-13, the total steps of international trade are classified into different topics. The learners can find the model letters as the examples that they want to learn by those topics. These model letters of each step can help the learners write business English letters.

The above assistant tools are helpful for the learners. We also design some assistant tools for the teachers, such as the query system. As shown in Fig. 3-14, the teachers can find the step, question and business English letter of each learner.

學號	姓名	職位	目前步驟	信件總數	發問總數	最近登入
student8	郭絳維	進口貿易公司業務員	(2)	(0)	(0)	2011-11-23 14:19:56
student9	郭小眼	進口貿易公司業務員	(2)	(0)	(0)	2011-11-23 14:19:56
student10	郭大維	進口貿易公司業務員	(2)	(0)	(0)	2011-11-23 14:19:56
student6	郭中維	進口貿易公司業務員	(2)	(0)	(0)	2011-11-28 18:19:48
student7	郭小維	進口貿易公司業務員	(2)	(0)	(0)	2011-11-23 14:19:56
student3	小明	出口貿易公司業務員	(1)	(0)	(0)	2011-10-31 12:21:06
student4	小白	出口貿易公司業務員	(1)	(0)	(0)	2011-10-31 12:21:06
student5	小黑	出口貿易公司業務員	(1)	(0)	(0)	2011-10-31 12:21:06
student1	小黃	出口貿易公司業務員	(1)	(1)	(1)	2011-11-28 18:51:02
student2	小華	出口貿易公司業務員	(1)	(0)	(0)	2011-11-19 21:10:46

Figure 3-14: Query System

3.5 Special Mechanism

To improve the quality of the system, we design two special mechanisms. Firstly, we let the learners correct other classmates' letters. Secondly, we allow the learners to practice the letters of all topics freely.

The teachers can decide whether they will allow the learners to correct their classmates' letters. This mechanism can improve the quality of the system. This mechanism can reduce the teachers' working load and allow them to observe some special phenomena. They can observe the learners' ability of detecting the errors of common English usage and the ability of giving the other learners correct comments.



Figure 3-15: Picking up the Learner

As shown in Fig. 3-15, the learners can pick up the other learner's letter to correct. After the learners pick up the letter, the system will transfer the page to the correction page.

The other special mechanism is the practice mechanism. In this system, the learners should follow the international trade process to write the English business letter. The learners cannot skip the step to practice the later task. However, the learners can practice the letters of all topics freely through the practice mechanism.



Figure 3-16: Practice Mechanism

As shown in Fig. 3-16, the learners can pick up a different role and pick up the model letters of different topics to consult with. In the system, different roles have to handle the letters of different topics.

4 System Demonstrations

4.1 System Flow Scenarios

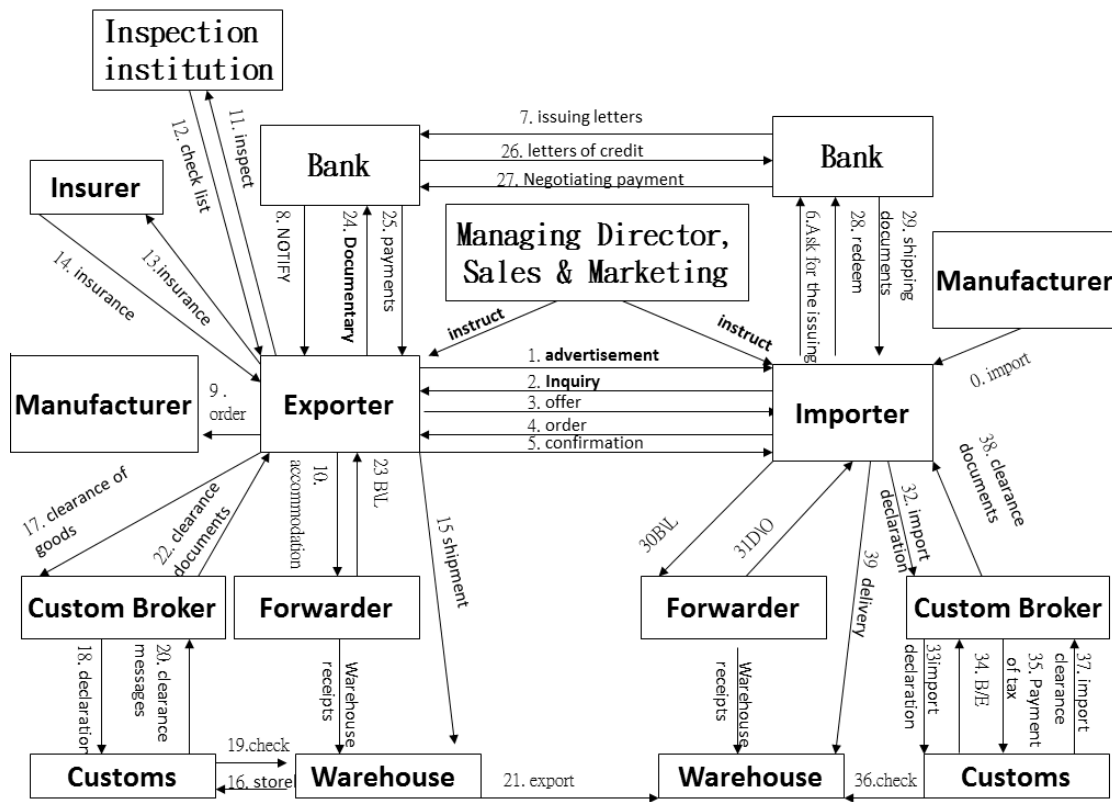


Figure 4-1 System Flow Diagram

The system uses the letter of credit to be payment for a transaction. The letter of credit is a document issued mostly by a financial institution, used primarily in trade finance, which usually provides an irrevocable payment undertaking. The system process shows in the Fig. 4-1.

The learners can decide whether their team is an importing company or an exporting company. Every learner should make a deal with the other partners within the same team. The learners will play different roles in the process. They will play the roles of the clerk, the

employee of the bank, the forwarder, the customs staff and the customs broker staff, etc. The learners will go to the next stage by writing the business letter or giving the correct attachment.

4.2 Teacher Side

A good e-learning system must appeal to the learners. For most learners, an online game is the best leisure activity. For developing a good e-learning system, we combine the concepts of online game with international trade. Every game needs to give the user a first task to initialize. In this system, the teachers should send a letter to command the learners to import something.



Figure 4-2 Commission Information

As shown in Fig. 4-2, the system will notify the teachers to send the letter to commission the learners to import something. The information of the commission letter in the area is surrounded with a red box. This area is a hyperlink. The teachers can go to the page to send the commission letter to the learners by clicking this hyperlink.

As shown in Fig. 4-3, it is the page with which the teachers send the commission letter to the learners. On the page, the teachers just need to fill with the content of the commission letter. The system will fill it up with the other column automatically.

After the teachers send the commission letter to the learners, the learners can make a deal among their team members. Then, the learners of the export side can send the advertisement letter to the learners of the import side. Then, the teachers will transfer it to normal model, wait to correct the letter of the learners' and answer the question of the learners.

文章本文 2011-10-30 04:46:45 信件代碼 965

寄件人 文章版本 文章主旨

職位 批改老師

發文組別

收件單位

收件公司 進口產品

函稿定案 老闆審核後,如果可以信函付郵請勾選

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標題

老師給分這篇文章的程度如何? A(優) B C D E(劣)

內容

委託勝利進口貿易公司進口筆電

Figure 4-3 Commission Letter

4.3 Export Side

The first task of the learners of the export side is sending the advertisement letter to the learners of the import side. The purpose of the advertisement letter is to make the learners of the import side understand the product's features of the export company.

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國際貿易實務
網路實習系統

第2組 成功出口貿易公司
student1
出口貿易公司業務員
文章新增與管理 登出系統

79人

執行者: 出口貿易公司業務員 任務: 向進口貿易公司寄發推銷信函 函稿資訊: 無
動作: 請點擊此段文字的紅色部分, 向進口貿易公司寄發信函推銷信函, 請選擇與貴公司出口貨物相關之公司.

Figure 4-4 Advertisement information

As shown in Fig. 4-4, the system will notify the learners of the export side to send the advertisement letter. The area that is surrounded with a red box is a hyperlink. The learners of the

export side can click the hyperlink and go to the page that is used to send the advertisement letter by this hyperlink.

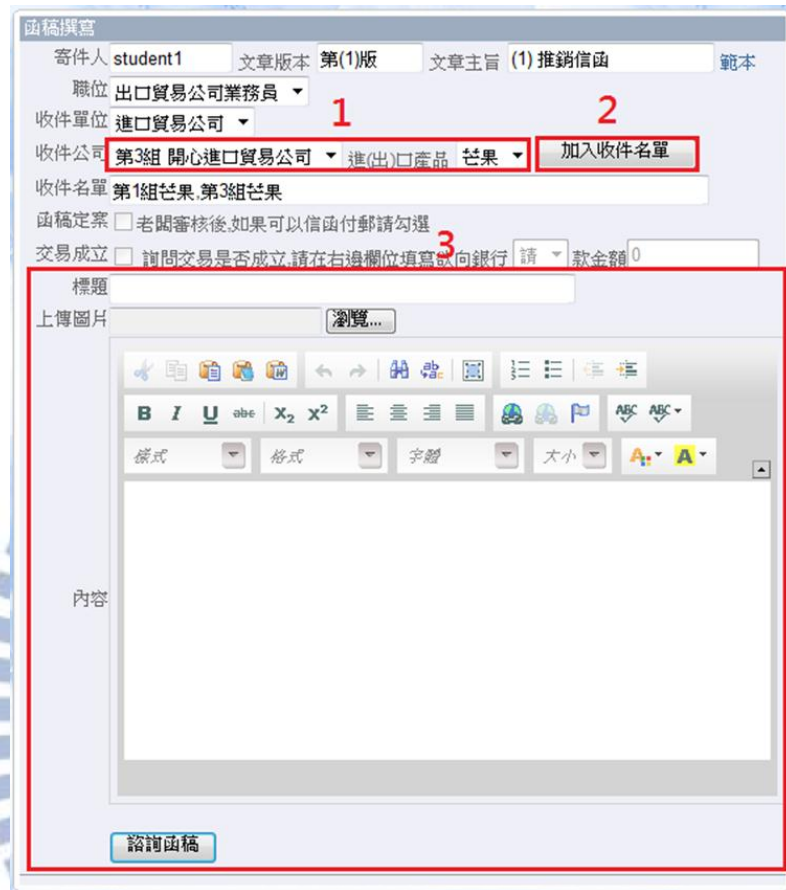


Figure 4-5 Advertisement Letter

As shown in Fig. 4-5, three different areas are surrounded with a red box, respectively. The first area shows the option of the importers. The second area shows the option of the products of each importer. The learners can choose the importers to negotiate a business transaction. After the learners send the letter, they will wait for the teachers to correct their letters in the third area.



Figure 4-6 Wait for the teacher

4.4 Import Side

The first task of the learners of the import side is sending an inquiry letter to the learners of the export side. However, before the learners of the import side start to write the inquiry letter, they must wait for two different letters. The first letter is the commission letter that is sent by the teachers, and the second letter is the advertisement letter that is sent by the learners of the export side.

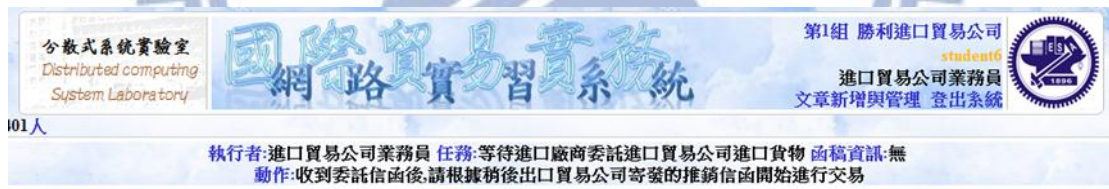


Figure 4-7 Waiting for the Commission Letter

As shown in Fig. 4-8, after the learners of the import side receive the commission letter, the information column will change.

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國際貿易實習系統

第1組 勝利進口貿易公司
student6
進口貿易公司業務員
文章新增與管理 登出系統

01人

執行者:進口貿易公司業務員 任務:等待出口貿易公司的推銷信函 函稿資訊:等待出口貿易公司來信,閱讀後依照內容提示進行任務
動作:出口貿易公司來信後,您能透過函稿資訊的連結或是在文章跟新增管理頁面找到該封信,閱讀後依照指示開始撰寫撰寫詢價信函

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Figure 4-8 Waiting for the Advertisement Letter

As shown in Fig. 4-8, after the learners of the import side receive the commission letter, the information column will change. The information column will show that the task is waiting for the advertisement letter.

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國際貿易實習系統

第1組 勝利進口貿易公司
student10
進口貿易公司業務員
回到首頁 文章新增與管理 登出系統

執行者:進口貿易公司業務員 任務:等待出口貿易公司的推銷信函 函稿資訊:已收到推銷信函,任選一封閱讀後依照內容提示進行任務
動作:出口貿易公司來信後,您能透過函稿資訊的連結或是在文章跟新增管理頁面找到該封信,閱讀後依照指示開始撰寫撰寫詢價信函

文章新增與管理
帳號管理
您的相關文章(新到舊)
您的相關文章(舊到新)
您發表之回應(新到舊)
您發表之回應(舊到新)
檔案室
常見英文錯誤說明
系統建議與意見回饋

視有信件列表
依收件單位分類 全部 篩選
依信件主旨分類 (1) 推銷信函 篩選

信件代碼	寄件人	發文單位	收件單位	信件主旨	標題	附件	日期
1099	student4	第2組 成功出口貿易公司	進口貿易公司	(1) 推銷信函	(1) 推銷信函	(1)	2011-12-30 04:01:13
1097	student5	第2組 成功出口貿易公司	進口貿易公司	(1) 推銷信函	(1) 推銷信函	(1)	2011-12-30 04:01:01
1019	student1	第2組 成功出口貿易公司	進口貿易公司	(1) 推銷信函	GOOD COMPANY WITH GOOD COSMETIC FOR YOU	(1)	2011-12-04 15:17:21

Figure 4-9 Receiving the Advertisement Letter

After receiving the advertisement letter, the system will notify the learners of the import side. As shown in Fig. 4-9, the information column will show that there are some advertisement letters.

文章本文 2011-12-04 15:17:21 信件代碼 1019

寄件人 文章版本 信件主旨

職位 批改老師

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標題

附件圖片 [student1_Penguins.jpg](#)

mango and are now desirous of expanding our market to your district.

We shall, therefore, appreciate it if you will kindly introduce us to the relative importers by inserting an announcement in your publication as follows:

"An Export company of Stationery Goods is now making a business proposal for Ball-Point Pens and Pencils which are said to have built a high reputation at home and abroad. Contact them by addressing your letter to..."

Expenses, if any, will be gladly paid by us on request.

Your close cooperation with us in this matter will be appreciated.

Faithfully yours

對方公司來函,閱讀完之後任選一封推銷信,然後點擊此處開始向出口貿易公司撰寫詢價信函

Figure 4-10 The Content of Advertisement Letter

As shown in Fig. 4-10, the learners of the import side can read all advertisement letters and pick one of those letters to start to negotiate a business transaction.

5 Experiments, Results and Analyses

5.1 Experiments

To assess the system, we develop a questionnaire using a five-point Likert scale ranging from “1-strongly disagree” to “5 -strongly agree”.

In the first part of the questionnaire, we use a well-known questionnaire System Usability Scale (SUS) to evaluate the system usability [54]. According to the research of Aaron Bangor [55] [56], products which are at least passable have SUS scores above 70. On the other hand, products with scores of less than 70 should be considered increasing scrutiny and continued improvement and should be judged marginal at best. Aaron Bangor made a differentiation in the marginal scores, by dividing them into “low marginal” and “high marginal”. Aaron Bangor also suggested that “products with scores less than 50 should cause significant concern and are judged to be unacceptable”.

In the second part of the questionnaire, we use three short answer questions. In this part, we use the grounded theory method to analyze the data [57].

Finally, we requested for learners’ basic information and Internet usage experience. The data shows as follows :

5.1.1 Data collection

According to the statistics, there are 102 learners in the system. There are 85 undergraduates and 17 graduate students. All the learners volunteer to join this system. We post the questionnaire on the Web and ask the learners to fill in the questionnaire. In the end, we receive 49 valid

questionnaires. On the other hand, we also ask the teachers who major in language teaching for opinions. We interviewed nine teachers and asked them to fill in the questionnaire.

5.1.2 Demographics and descriptive statistics

The learners include 83.6% females and 16.4 males. More than ninety percent (91.8%) of learners are aged between 19 and 22 years old, 6.1% of learners are aged between 23 and 26 years old and 2.1% of learners are aged between 24 and 27 years old. The questionnaires filled in by the undergraduates are the major data source (91.8%). There are 66% of the learners who use the internet service more than 10 years, another 27% of the learners use the internet service more than 7 years but less than 10 years and the other 7% of the learners use the internet service more than 4 years but less than 7 years. There are 26% of the learners who use the internet more than 7 hours per day, another 21% of the learners use the internet service more than 4 hours but less than 7 hours and the other 53% of the learners use the internet service more than 1 hours but less than 4 hours. All learners use the internet service such as search engine, dictionary, map and another common internet services. Overall, 87% of learners had used the e-learning systems.

5.2 Results and Analysis (1st investigation of learner side)

5.2.1 System Usability Scale

We can see the SUS questionnaire responses in Table 5-1. At the beginning, we can see the score of the SUS is just 58.13 According to the research of Aaron Bangor, products with scores more than 55 lie between “OK” and “GOOD”. It means that the product should increase scrutiny and continue improvement. It is not a good value. However, we can find some reasons to explain it.

Firstly, the means of the items “I think that I would need the support of a technical person to be able to use this system” and “I needed to learn a lot of things before I could get going with this

system.” are the same, 4.00. It means that most learners think they need somebody to help them learn to use the system or they need to learn a lot of things before they could get going with this system. The standard deviations of these two items are 0.76 and 0.53 respectively. This result matches with the result of the mean. It means that most learners express the same opinion. It is a not good news for us.

We think that this system is the new system that combines the international trade process and e-learning. According to the statistics, many learners of this system major in English language, law and computer science. Some learners major in international trade. For the learners who do not major in international trade, they cannot understand what they should do at the beginning. For the learners who major in international trade, they can realize the international trade processes easily. However, for the other learners, it is not so easy. As we know, some freshmen who major in international trade also has to spend some time to realize the international trade processes.

The system not just uses the slides or teaching videos to provide the knowledge for the learners. The learners have to practice the international trade processes. We hope the learner can make a deal in the system just like in the real world. In the fact, some learners think the system is a little complex. They hope that the process of the system should be simplified. We think that we should make an effort to improve the instructions of the system. We must let any learner who joins the system be familiar with the system easily and quickly.

Beside the difficulty of learning international trade processes, how to use the functions of the system is also a problem. The functions of the system are just the common internet functions. However, when those functions combine with the international trade processes, it will be a little complex. Sometimes the learners cannot understand how to use those functions. It is a good challenge for us to find a balance between the reality and usability.

Table 5-1 SUS Questionnaire (First investigation of learner side)

System Usability Scale	Mean	SD
I think that I would like to use this system frequently.	3.75	0.46
I found the system unnecessarily complex.	2.88	0.83
I thought the system was easy to use	3.62	0.74
I think that I would need the support of a technical person to be able to use this system	4.00	0.76
I found the various functions in this system were well integrated.	3.88	0.64
I thought there was too much inconsistency in this system	2.63	0.52
I would imagine that most people would learn to use this system very quickly.	4.00	0.53
I found the system very cumbersome to use.	2.25	0.46
I felt very confident using the system.	3.75	0.46
I needed to learn a lot of things before I could get going with this system.	4.00	0.53
	SUS score	58.13

Secondly, the standard deviation of the item “I found the system unnecessarily complex” is 0.83. This is the maximum standard deviation of this SUS questionnaire. It means that some learners think the system unnecessarily complex or the system very cumbersome to use, but some learners do not think so. The mean of this item is 2.88. It means that the learners who think the system unnecessarily complex are a little less than those do not think so. It is a good news. However, there are still many learners who think that the system should be changed. We must do something to improve the system.

Finally, the average values of the items “I found the various functions in this system were well integrated” and “I would imagine that most people would learn to use this system very quickly” are 3.88 and 4.00. It means that most learners think that they can use the system to learn the knowledge of international trade and the design of the system is good for them. Although it is a good news for us, we know that we still have to make efforts to improve the system.

5.2.2 Short Answer

Table 5-2 Short Answer (First investigation of learner side)

Keyword	A portion of response
complex	It is a little complex. I have no idea how to use it.
	Some part of the system is a little complex.
simplify	I think the web page should be simplified.
	The process should be simplified.
appealing	The picture in the system should be more appealing.
	The interface should be more appealing.
process	The process should be clearer.
	If there are more instruction of process will be better.
user-friendly	The interface should be more user-friendly.
	The function should be more user-friendly
practice	The system can let me practice all things that I learn from the textbook.
	The system is easy for me to practice the business letter.
easy to use	The system is easy to use. It doesn't take too much time to learn how to use the system.
	It is easy to use. It automatically reminds me what I should do.
function	If it adds the function that let me chat online, it will be good.
	Maybe it can add some function, such as video conference.
instructions	I need more instructions about the function.
	I have no idea at the beginning. Maybe I need more instructions.

Table 5-2 shows the categorized feedbacks from the learners. In Table 5-2, we can find some problems in the system.

Firstly, many learners think that the process of the system is a little complex. They think that the process should be simplified. We think that we must simplify the process and make the

process be clearer. We think that we should make an effort to improve the instructions of the system and sufficient instructions can help the learners understand how to use this system quicker. If we just try to simplify the process, it is not enough for learners. We should add more illustrations in the right place. It matches with the result that we got from the SUS Questionnaire.

Secondly, although some learners think the system is easy to use, it is still not appealing to the learner. The functions and interface are not user-friendly. We should adjust the pictures and the colors of the system.

Finally, some learners hope we can make an effort to improve the function of communication. Adding the function of video conference is a good idea.

5.3 Results and Analysis (2nd investigation of learner side)

In the second version of the system, we simplified the flow of the system and offered the new detailed instruction. We changed the interface of the system, adjusted the function of the former system and designed new user-friendly tools for the users.

5.3.1 System Usability Scale

We can see the SUS questionnaire in Table 5-3. At the beginning, we can see the score of the SUS is just 65.94 According to the research of Aaron Bangor, products with scores of more than 65 lie between “OK” and “GOOD”. It means that the product should increase scrutiny and continued improvement. It is better than the former version. Although it is a good news for the researcher, there are still many topics that should be discussed.

Firstly, the mean of the item “I think that I would need the support of a technical person to be able to use this system” is 2.75 and this mean is 1.25 less than that in the first investigation. The mean of the item “I needed to learn a lot of things before I could get going with this system” is 3.00 and this mean is 1.00 less than that in the first investigation. The standard deviation of

former item is 1.16 and this standard deviation is 0.40 more than that in the first investigation. The standard deviation of later item is 1.41 this standard deviation is 0.88 more than that in the first investigation.

The means of these two items both decrease and the standard deviation of these two items both increase. The decreasing of mean shows more and more learners think that they would not need the support of a technical person to be able to use this system. Although the mean of the item “I needed to learn a lot of things before I could get going with this system” also decreases, the range of change is not more than the item “I think that I would need the support of a technical person to be able to use this system”. We think that the reason for this result is that we offer the detailed instructions. Some learners think that the behavior of reading the instructions matches with the item “I think that I would need the support of a technical person to be able to use this system”. We think this is the major reason for the range of change.

Table 5-3 SUS Questionnaire (Second investigation of learner side)

System Usability Scale	Mean	SD
I think that I would like to use this system frequently.	3.75	0.46
I found the system unnecessarily complex.	2.38	1.06
I thought the system was easy to use	3.88	0.99
I think that I would need the support of a technical person to be able to use this system	2.75	1.16
I found the various functions in this system were well integrated.	4.00	0.53
I thought there was too much inconsistency in this system	2.63	0.74
I would imagine that most people would learn to use this system very quickly.	4.13	0.35
I found the system very cumbersome to use.	2.38	0.52
I felt very confident using the system.	3.75	0.46
I needed to learn a lot of things before I could get going with this system.	3.00	1.41
	SUS score	65.94

The standard deviations of those two items both increase. It means that the opinion of learners becomes more and more different. With the means of these two items increase, we think more and more learners think that they do not need anybody to help them learn to use the system or they do not need to learn a lot of things before they could get going with this system. The increasing of those items means that some learners select “agree” or “strongly agree” in the first investigation. In the second investigation, although some learners still think they need somebody to help them learn to use the system or they need to learn a lot of things before they could get going with this system, some learners do not think so. They change their choice from “agree” or “strongly agree” to “disagree” or “strongly disagree”.

In addition to offering the detailed instructions, we also simplify the process of system and adjust the interface of the system. In the former version of the system, a learner has two different roles at the same time. It let the learners feel confused. In the new version of the system, the learners just have a role at the same time. With the evolution of the process, the learners will change the role automatically. This change simplifies the process and interface. The learners can focus on one thing at one time.

Secondly, the standard deviation of the item “I found the system unnecessarily complex” is 1.06 and this standard deviation is 0.23 more than the same item in the first investigation. It means that more and more learners select the opposite options when they face this question. However, we cannot make sure whether this change is good or bad, we must check the other statistics. The mean of the item “I found the system unnecessarily complex” is 2.38 and this mean is 0.50 less than the same item that in the first investigation. It means that more and more learners who do not think the system unnecessarily complex. It is good news for me. This result also let me understand the change of the standard deviation. This change maybe is that the learners

change their choice from “agree”, “strongly agree” to “disagree, or “strongly disagree” in the second investigation. However, there are still many learners who think that the system unnecessarily complex. We still have to do something to improve the system.

Finally, the mean of the item “I found the various functions in this system were well integrated” is 4.00 and this mean is 0.12 more than the same item in the first investigation. The mean of the item “I would imagine that most people would learn to use this system very quickly” is 4.13 and this mean is 0.13 more than the same item in the first investigation. The standard deviation of former item is 0.53 and this standard deviation is 0.11 less than the same item in the first investigation. The standard deviation of later item is 0.35 this standard deviation is 0.18 less than the same item in the first investigation.

The means of those two items both increase and the standard deviations of those two items both decrease. The increasing of means shows that more and more learners give positive feedback and the decreasing of standard deviation shows that most learners have the same opinion.

5.3.2 Short Answer

Table 5-4 shows the categorized feedbacks from the learners. In the Table 5-4, there are still many topics that could be discussed.

Firstly, we offer the detailed instructions, add the functions and change the interface in this new version. Many learners show that “the interface is more user-friendly than former version” and “the function is more user-friendly than former version”. It means the learners think that the new version makes good change.

Secondly, we also simplify the process in the new version. Many learners show that they think that they can be familiar with this system. They think they should often use this system and

they believe that if they often use this system, they will be familiar with the system and international trade process”. It means that it can raise the interest of the learners by offering them a clearer system.

Thirdly, with the process becoming clearer, the learners show that “the system is easy to use. This version does not take too much time to learn how to use the system”. We think the sufficient instruction also helps the learners use this system so the learners feel the system become easier to use.

Table 5-4 Short Answer (Second investigation of learner side)

Keyword	A portion of response
familiar	I think that I can be familiar with this system. I think I should often use this system.
	I believe that if I often use this system, I will be familiar with the system and international trade process.
user-friendly	The interface is more user-friendly than former version.
	The function is more user-friendly than former version
notification	Maybe it could add the mechanism of emergency notification.
	I hope it can use the e-mail as the way of notification.
easy to use	The system is easy to use. This version does not take too much time to learn how to use the system.
	It is easy to use. The hint of this version is clearer than former version.
function	If it add the function that let me discuss with my teammate, it will be good.
	I hope it can add the function that is “spell check”.
	There are enough functions for me to use the system.
instructions	I think the instructions are good.
	This version has the more detailed instructions than former version.

Fourthly, in addition to the positive feedback, many problems should be solved. Many learners hope that the system should add the mechanism of emergency notification. Some learners also hope that the system can use the e-mail as another way of notification.

Finally, some learners show that they think that there are enough functions for them to use the system. They just need some time to be familiar with this system.

5.4 Results and Analysis (Teacher side)

5.4.1 System Usability Scale

In this system, we created a colorful annotation system to help the teachers correct the articles of the learners. We used the system usability scale questionnaire to assess the system.

Table 5-5 SUS Questionnaire (Teacher)

System Usability Scale	Mean	SD
I think that I would like to use this system frequently.	4.44	0.73
I found the system unnecessarily complex.	2.11	0.33
I thought the system was easy to use	4.44	0.50
I think that I would need the support of a technical person to be able to use this system	2.44	1.59
I found the various functions in this system were well integrated.	3.78	0.97
I thought there was too much inconsistency in this system	2.11	0.78
I would imagine that most people would learn to use this system very quickly.	4.00	0.00
I found the system very cumbersome to use.	1.78	0.44
I felt very confident using the system.	4.00	0.00
I needed to learn a lot of things before I could get going with this system.	2.44	1.33
	SUS score	74.17

As shown in the Table 5-3, the score of the SUS is 74.17. According to the research of Aaron Bangor, products with this score lie between “GOOD” and “EXCELLENT”. It is a good

value. It means that the colorful annotation system could help the teachers correct the English letter. Although this score is good, there still have some themes for discussion.

Firstly, the standard deviation of the item “I think that I would need the support of a technical person to be able to use this system” is 1.59. It means some teachers think they need somebody to help them learn to use the colorful annotation system, but the other teachers do not think so. Few teachers show “no comment”. The mean of this item is 2.44. It means that the teachers who need the support of a technical person or the teachers who need to learn a lot of things before they could get going with this system are a little less than the teachers who do not need.

Secondly, the standard deviation of the item “I needed to learn a lot of things before I could get going with this system” is 1.33. It means some teachers think they need to learn something before they start to use the colorful annotation system, but the other teachers don't think so. Few teachers show no comment. The mean of this item is 2.44. It means that the teachers who think that they need to learn a lot of things before they could get going with this system are a little less than the teachers who do not think so. This result is just like the item that is “I think that I would need the support of a technical person to be able to use this system”. They both need some help to use the colorful annotation system.

According to the results of the first two, we think that we need to create more assistant tools to help the teachers learn how to use the colorful annotation system. We also have to write the instructions in detail.

Thirdly, there are some interesting results. The standard deviation of the item “I would imagine that most people would learn to use this system very quickly” and the standard deviation of the item “I felt very confident using the system” are both 0.00. This result means that although the teachers need some help to use the colorful annotation system at the beginning, they can use

the colorful annotation system well after they get help. The mean of those two items is 4.00. It means that the teachers think that most people would learn to use this system very quickly and they feel very confident using the system. It is good news for me.

Fourthly, the minimal mean of the all items is 1.78. The item is “I found the system very cumbersome to use”. The standard deviation of the item is 0.44. It means most teachers think the colorful annotation system is not hard to use. This result matches the result of the former paragraph. If we can offer enough assistant tools to the teachers, most teachers are can use the colorful annotation system.

Finally, the maximum mean of the all items is 4.44. The items are “I think that I would like to use this system frequently” and “I thought the system was easy to use”. The standard deviation of the former is 0.73 and the standard deviation of the latter is 0.50. This result also shows that most teachers think that the colorful annotation system is easy to use. They are also willing to use this system frequently.

5.4.2 Short Answer

In addition to the opinion of learners, we also ask the teachers for filling in the short answer questions. Table 5-4 shows the categorized feedbacks from the teachers. In the Table 5-4, we can find some problems in the system.

Firstly, too many colors will cause the problems. If there are many different errors, there will be too many colors in the letter. This problem will decrease the efficiency of learning. The learners cannot easily realize what type of error that they make. As the former chapter mentioned, the learners' major difficulty in error correction lies in their failure to detect errors rather than the lack of knowledge. To solve this problem, we should find the best relationship between color and

error. Perhaps we should reform the user interface of the colorful annotation system and pick the right color in the right place.

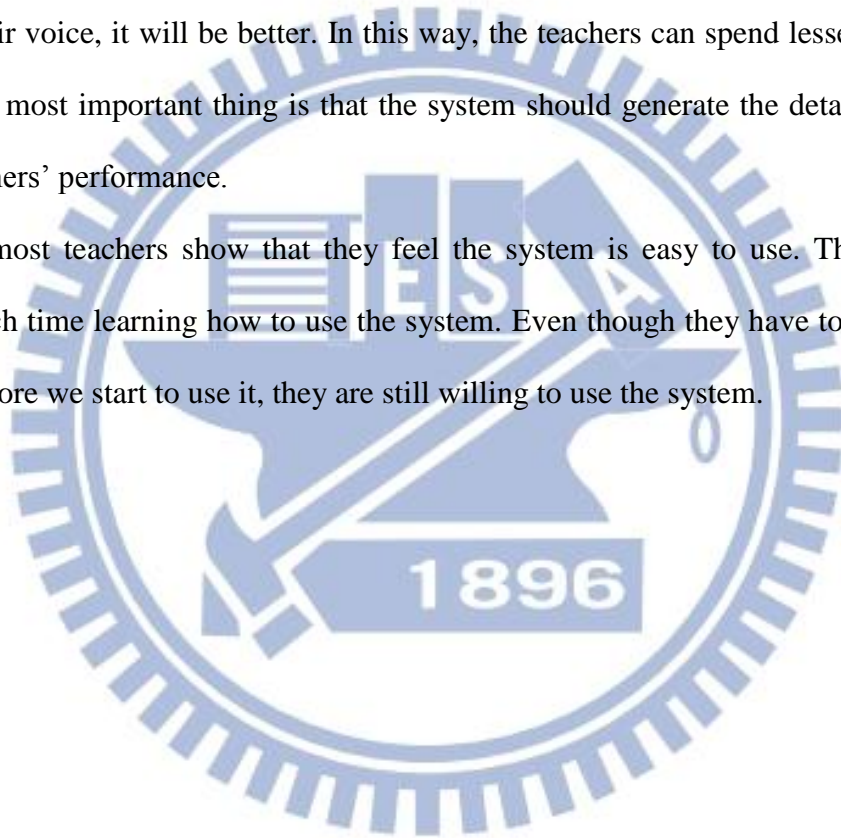
Table 5-6 Short Answer (Teacher)

Keyword	A portion of response
color	If there are many different errors, there will be too many colors in the letter.
	Please enhance the relationship between the color and error.
	Pick the right color in the right place.
button	The button should be clearer.
	Please add some functions about the buttons. (Ex. Hot key)
easy to use	The system is easy to use. It doesn't take too much time to learn how to use the system.
	Although it is easy to use, I still have to learn how to use the system before I start to use it.
notify	I hope the system can notify me that there are some letters that wait to be corrected.
	Please design some notification mechanism to help me know the status of learners.
type of errors	There should be more type of errors, such as document structure, writing style and so on.
	Please classify the type of errors in detail.
	I hope I can add the type of errors by myself.
function	I hope it can add the function. The function can detect the possible errors of English.
	I hope it can add the function. The function can record the voice.
	I hope it can add the function. The function can generate the report that is about the learners' performance.
	I hope it can add the function. The function can help the learners find the right answer.

Secondly, perhaps the types of errors need to be adjusted. In the fact, there should be more type of errors, such as document structure, writing style and so on. We also have to find some way to make the meaning of the errors be clearer. Maybe allowing the teachers to select the type of errors that they need is a good idea.

Thirdly, in order to improve the system usability, we should add some useful functions for the teachers. For example, the function can detect the possible errors of English. If the teachers can record their voice, it will be better. In this way, the teachers can spend lesser time correcting the letter. The most important thing is that the system should generate the detailed report that is about the learners' performance.

Finally, most teachers show that they feel the system is easy to use. They don't need to spend too much time learning how to use the system. Even though they have to learn how to use the system before we start to use it, they are still willing to use the system.



6 Conclusion and Future work

6.1 Conclusion

E-learning has already become the important part of learning. The teachers try to use the Learning Management System (LMS) and Learning Content Management System (LCMS) to find the better teaching method. Although E-learning system is very common, there is still no E-learning system that combines with international trade process and business English letter. The study develops the system to help the learners learn international trade practice anytime and anywhere.

In the International Trade Practice Learning System, the learners not only practice writing business English letters but also learn the knowledge of international trade processes. This system does not only provide services from the learners' perspective. We also design the colorful annotation system to classify the common errors in English usage for the teachers.

The most important contribution of the International Trade Practice Learning System to both the teachers and the learners is that the system makes some contribution to the communication between teachers and learners and the learners can effectively improve their knowledge about both of international trade and business English. There is huge difference with traditional teaching method of international trade. International trade process and business English letter are no longer just two independent entities.

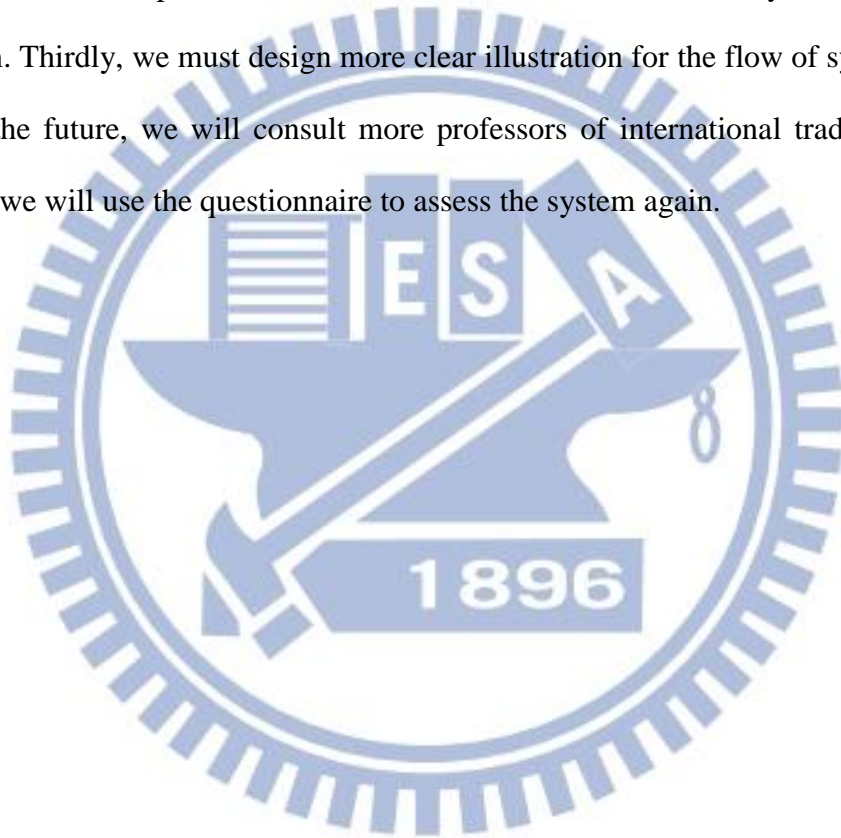
According to the result of the experiments, it shows that the International Trade Practice Learning System can let the learners practice all things that they learn from the textbook. The International Trade Practice Learning System can also be easy to use. The learners don't need to

spend too much time learning how to use the system.

6.2 Future work

The study develops the system to help the learners learn international trade practice anytime and anywhere. Through the questionnaire, we know the problems of the system. The further studies will improve the following parts.

Firstly, we need to improve the communication mechanism. Secondly, we should adjust the flow of system. Thirdly, we must design more clear illustration for the flow of system and system functions. In the future, we will consult more professors of international trade to improve the system. Then, we will use the questionnaire to assess the system again.



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Appendix A: System Usability Scale for the International Trade Practice Learning System

Instructions: For each of the following statements, mark one box that best describes your reactions to an International Trade Practice Learning System

		Strongly Disagree			Strongly Agree	
1.	I think that I would like to use this system frequently.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	I found the system unnecessarily complex.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	I thought the system was easy to use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	I think that I would need the support of a technical person to be able to use this system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	I found the various functions in this system were well integrated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	I thought there was too much inconsistency in this system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	I would imagine that most people would learn to use this system very quickly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	I found the system very cumbersome to use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	I felt very confident using the system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	I needed to learn a lot of things before I could get going with this system.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

This questionnaire is based on the System Usability Scale (SUS), which was developed by John Brooke while working at Digital Equipment Corporation. © Digital Equipment Corporation, 1986.

Appendix B: Short Answer Questions for the International Trade Practice Learning System

Instructions: For each of the following statements, please write that best describes your reactions to an International Trade Practice Learning System

1. Please tell me what you had learned from the International Trade Practice Learning System and your reflection on International Trade Practice Learning System.

2. Do you think anything should be improved on the International Trade Practice Learning System? Is there anything the International Trade Practice Learning System should change?

3. Do you think any function or tool should be added to the International Trade Practice Learning System?