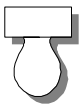

CHAPTER FIVE

A COMPARATIVE STUDY OF TWO EFL WRITING ENVIRONMENTS: A COMPUTER LAB AND A CONVENTIONAL CLASSROOM

5.1 Introduction

In the domain of English teaching and learning pedagogy, a prominent movement in recent years has been the integration of new computer technologies. Since the early 90s, more and more teachers have moved their classes out of the traditional classroom into the computer room, where the computer-based technologies can best be utilized. Because the Internet places English in an international context, many teachers of English have integrated the Web as an invaluable part of their teaching. They design activities and projects for which their students have to either use e-mail for global communication or explore the Internet by clicking the mouse. Wolff (1998) claims that no one can deny the necessity of introducing these technologies into the educational sector.

From a writing teacher's standpoint, there is an even more essential need to involve students in the usage of computer-based technology. First and foremost, students can use e-mail to collaborate and share their writings with other classmates and teachers for multiple revisions. The computer network is of enormous help in getting students to view

writing as a process. Secondly, Warschauer & Whittaker (1997, Guidelines section, para. 2) believe that using the Internet creates "optimal conditions for learning to write, since it provides an authentic audience for written communication." Just as the Internet provides a context for real-world communication, interaction via e-mail types of communication like newsgroups, electronic discussion lists, and keypal exchanges, lends a feeling of reality to students' communicative efforts. This is exciting for teachers of English because the Internet provides the opportunity for students to interact with a wider variety of partners than can be found within the walls of the traditional classroom. Finally, motivation is always a key issue in the field of education. The use of the Internet in teaching writing promotes intrinsic motivation among students. Students are attracted to this global network structure because they can make real encounters with the English language and culture.

Research shows that using network technology can help students become better problem solvers and better communicators (Belisle, 1996). Sullivan and Pratt's (1996) research shows that networking has freed students from the limitations of traditional writing tools and helped them to develop communicative abilities. Liao (1999, Conclusion section, para. 1) claims that the "students' writing for my Sophomore EFL Writing class, during the email swapping periods, has been easier to understand than before. The authentic readership has contributed partly to the improvement." Jan (2000, From the Students' Point of View section, para. 2) claims that her students "agreed that using the computer and the Internet gave them a novel feeling about learning English writing. These new technologies really aroused their interest in studying the language." Bergland (1996) declares that in addition to being a valuable research tool, the Internet can be integrated to enable students to examine rhetorical issues in bulletin board, electronic list, and newsgroup discussions. Bennett (1999, Prologue section, para. 5) stresses the gains of using the computer technology, "gains that may seem like fantasies to anyone who hasn't studied the power and capability of this technology."

However, it is widely known that technological implementation is

never easy. There are no doubt a number of problems painful to those designing a wired classroom. Kluge (1997) discussed possible technical problems, student problems and curriculum problems. In addition, the teacher who integrates the new technology takes on more of a role as a facilitator and is often challenged with unexpected situations.

The purpose of this article is to compare the experiences of conducting a writing class in two different environments: a traditional classroom and a computer lab. Some of the benefits and challenges of a computerized writing classroom are identified and discussed. In the spring (second) semester of the 2000-2001 academic year, as an experiment, the author decided to take one Sophomore EFL Writing class to a computer lab. This decision caused many challenges, problems, and difficulties for both the teacher and her students. Although all the problems were eventually solved or resolved, it is worthwhile to document these difficulties and problems because they help develop a path for future successful projects.

5.2 Methods

The context of the study, class materials and activities, data collection procedure as well as data analysis methods are presented in this section.

5.2.1 The Context

The context for this study was a required writing course for sophomore English language and literature majors at Soochow University. The course lasted for two consecutive semesters (eight months) during the fall of 1999 and spring of 2000, with a four-week winter break between the two semesters.

There were 30 students in the course, most of whom learned American English as a foreign language. A survey[1] conducted after the course shows that the majority of students (82%) had had some

[1] See Appendix 5.1.

experience using computers before the course, although a wide range in the degree of prior experience was observed among them. A large percentage of students also acknowledged that they had not realized that Internet-based resources, e-mail discussion lists and keypals were useful to improve their writing skills. Thus, for these students, the experience of having writing classes in a computer lab was generally new and unfamiliar.

5.2.2 Comparison of the Two Different Settings

Classroom setting	
In the fall (first) semester, the class was conducted in a conventional classroom where there were no computers.	In the spring (second) semester, after some negotiation, the teacher and the students agreed to use a computerized classroom where each student had a computer for his or her use. They also had an easy access to the Internet.
Class materials	
MOSAIC 1: A Content-Based Writing Book (Blass & Pike-Baky, 1996) was used as the textbook along with some supplementary handouts compiled by the author.	On-line lessons suitable for curriculum integration were used. On-line dictionaries[2] and other on-line writing resources[3] were also introduced to the students.
Class format and activities	
1. Teacher lectured text materials with a blackboard and showed good models	1. Teacher explained on-line lessons and showed good models with a computer.

[2] Some examples of on-line dictionaries were titania.cobuild.collins.co.uk, www.oneworld.org., www.onelook.com, and www.m-w.com.

[3] Some examples of writing on-line labs and virtual language centers were 英語傳教士 www.ep66.idv.tw, 海大英文作文 ntouvlc.ntou.edu.tw, 中央英語教學資料庫www.ncu.edu.tw, and translation software, such as 譯典通資訊網 www.dreye.com

with an overhead projector. 2. Students worked on editing exercises individually with handouts and compared their results in groups. 3. They discussed sample student writings in groups. 4. They brainstormed ideas for their writing in groups.	2. Students worked on editing exercises individually on the computer and compared their results in groups. 3. They discussed sample student writings in groups. 4. They searched for ideas for their writing on the computer. 5. They individually worked on telecommunicaiton activities[4].
Out-of-class interaction	
There was neither a class email list nor a class website available.	There was a class email list and a class website. Some class materials and student writings were posted on the class website[5].
Formal writing assignments	
Students used word-processing at home and handed in a hard copy.	Students used word-processing at home and handed in a floppy disk.
Informal writing assignments	
Students were asked to write bi-weekly journals. They used the journal to write about any topic that interested them. The teacher was the audience of the journal.	Students were given the option to either maintain an e-mail keypal or subscribe to an electronic discussion list for language learners, such as SL-LISTS[6]. The telecommunication projects provided students with a real-world audience.

[4] The web sites the author found useful in finding on-line lessons and activities were OWL at Purdue University at http://owl.english.purdue.edu/, International Writing Exchange located at http://www.hut.fi/~rvilmi/Project/IWE/, M C Morgan, Writing Resource Center, Bemidji State University, located at http://cal.bemidji.msus.edu/wrc/handouts/ProofAndEdit.html, Teaching Ideas Writing at http://www.ncte.org/teach/write.shtml, The UVic Writer's Guide at http://www.clearcf.uvic.ca/writersguide/Pages/StartHere.html, University of Victoria English Language Centre located at http://web2.uvcs.uvic.ca/elc/OLCourse/.

[5] The class web page is at http://home.kimo.com.tw/writingclass/index.htm

[6] SL-LISTS was located at http://www.latrobe.edu.au/www/education/sl/sl.html.

5.2.3 Data Collection

In order to understand students' experience with the computerized writing class and the telecommunication project, this study exploited two methods of data collection: a survey and an interview. At the end of the spring semester, a survey with 38 questions[7] was distributed to the students. It asked students about their prior computer and Internet experiences as well as how they felt about the course with and without the computer in two consecutive semesters. In the 4-item Likert scale questionnaire, "A" stood for "strongly agree" and "D" indicated "strongly disagree" with "B" and "C" choices representing milder agreement and disagreement. Twenty four out of the total 30 students in the class filled out the survey as requested.

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Interviews of five to 10 minutes were conducted with 25 students during class meetings following the survey. The purpose of the interviews was to corroborate the survey data and solicit further feedback. The interviews were semi-structured. That is, during the interviews, students were told to freely describe and reflect on their experiences in the computer lab as opposed to their experiences in the conventional writing classroom. Some elaborated and spoke out more, while others needed to be prompted for responses. In order to encourage flow of conversation and to avoid intimidating students, the researcher did not use a tape recorder during the interviews. Instead, all data were noted thoroughly by hand during the interviews and were reviewed and revised immediately afterward so that all important information was recorded as completely as possible.

5.2.4 Data Analysis

First, the interview data were organized and listed on paper for easy comparison. Using a concept-mapping approach, similar comments were put into common categories. All the resulting categories were then

[7] See Appendix 5.1.

contrasted and compared and several important themes were identified. The percentage was calculated for survey responses[8] and then used to support and triangulate with the interview data.

5.3 Findings

As the author thought up the survey questions and conducted the survey before the interviews, the survey questions failed to take into consideration all ideas and feelings students expressed when interviewed. As a result, some of the interview results could not be included in the survey results. Though these results are generally significant, they cannot be discussed as findings from the data analysis.

Based on the analysis of the survey and interview results, several benefits and challenges can be seen from the students' perspectives.

5.3.1 Motivating effects of the computerized writing class

One positive effect of using the computer was motivational. For one thing, our students willingly accepted the extra charges imposed by Soochow University for using the computer in the writing class. At first the teacher was not sure whether students would pay the extra NT$1,200 which the university charged for the facility. Therefore, before the first semester ended, the class voted anonymously whether the class should be held in the computer lab during the upcoming spring semester. To the teacher's surprise, the majority of students chose the computer lab in spite of the additional fee. In the survey, the response to Question 35 indicated 70.83% (20.83% strongly agree + 50.00% agree) of the students agreed that they were more motivated working in the computer lab.

Because students showed interest in new technologies, they were more susceptible to on-line lessons and activities. Question 28 indicated that 79.16% (8.33% strongly agree + 70.83% agree) of the students felt

[8] See Appendix 5.1 for percentages of the survey responses.

they participated more in class activities in the computer lab. Question 33 indicated that 75% (29.17% strongly agree + 45.83% agree) of the students felt the activities they did in the computer lab were more interesting and helpful. Question 32 indicated that 95.84% (41.67% strongly agree + 54.17% agree) of the students felt the materials used in the computer lab were more interesting and of more variety. Finally, Question 23 indicated that 58.33% (12.5% strongly agree + 45.83% agree) of the students felt they were more supportive of each other in the computer lab. With such high motivational power, the author concludes that it may indeed be worthwhile for writing teachers to utilize computer labs on a frequent basis.

5.3.2 More Ideas for Writing

It was evident that in the computerized classroom, students spent more time writing and generated more ideas. It was a lot easier for students to search for ideas and information on the Internet before they started to write and to edit and discuss one another's work and then immediately make revisions on the computer after they finished their writing. Question 30 showed that 87.5% (16.67% strongly agree + 70.83% agree) of the students agreed that they spent more time on their writing assignments in the computerized class. Question 29 indicated that 79.16% (8.33% strongly agree + 70.83% agree) of the students felt they generated more ideas for writing in the computer lab. Two students (S 27 and S29) pointed out that it was more efficient to revise their writings on the computer in class. Four students (S1, S9, S13, and S25) expressed appreciation for the teacher's active involvement and support in the computer room, which they claimed greatly helped them in the process of writing.

5.3.3 More out-of-class interaction

Electronic networks also greatly encouraged teacher-student interaction. With a class email list, the author and students could often communicate outside of the classroom. Altogether 84 messages were automatically

received by all those on the list during the spring semester. The teacher used e-mail to make class announcements and give progress reports when needed. The students used e-mail to ask questions and share their thoughts, ideas, or other information with the whole class. Question 25 indicated that 83.33% (8.33% strongly agree + 75% agree) of the students felt there was more teacher/student and student/student interaction in the computer lab. Five students (S1, S2, S23, S27 and S29) specifically expressed that the class email list facilitated their communication with the teacher. They could ask questions practically at any time they wished. As there was more time allowed for individual students to work on the computer (students searching for information on the Internet and working on telecommunication activities, etc.), the teacher could better counsel individual students on their writing and telecommunication projects. Questions 26 showed that 62.5% (16.67% strongly agree + 45.83% agree) of the students felt they got more individual attention from the teacher in the computer lab. Question 31 pointed out that 83.33% (25% strongly agree + 58.33% agree) of the students felt they got more feedback on their writing from the teacher in the computer lab.

5.3.4 Benefit of the Telecommunication Projects

In lieu of journal writing with the teacher as the audience, students in the spring semester were required to participate in a keypal exchange project or in an electronic discussion list. Partners whom students found for the project ranged from students of different majors to working people in various professions. Life experiences were exchanged; and cultural differences were discussed. Question 14 showed that 87.5% (29.17% strongly agree + 58.33% agree) of the students found keypaling interesting and helpful in learning English. Question 13 showed that 58.33% (8.33% strongly agree + 50% agree) of the students found the discussions on the list groups interesting and stimulating.

Students felt that e-mail exchange with distance partners gave them an additional context for free communication. During interviews, many

students (S5, S6, S16, S18, S21, S24, S27, S28, and S29) expressed their delight and disbelief in the fact that they could actually communicate with people far away and of totally different backgrounds. For example, one student exchanged her views on Christianity with a member of an on-line church group. She said, “It was very difficult for me to write letters in English. However, at the end of the semester, I learned how to use e-mail to get information from my partner, which encouraged me to write English more in my daily life” (Interview Data, Student No. 19). S26 succeeded in generating heated discussion on the topic, “Which movie will win the Oscar Award?” in the MOVIE-SL discussion group. Students who thus successfully connected with their partners often felt that the telecommunication project experience was worthwhile and meaningful.

5.3.5 Challenges Posed by Telecommunication Projects

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Difficulties and concerns with the required telecommunication projects were certainly encountered in this course. Question 9 showed 54.17% (12.5% strongly agree + 41.67% agree) of the students felt it was difficult to subscribe to and use list and discussion groups. Sustaining communication through shared interests was often a challenge for students. While Question 10 showed only 37.5% (0% strongly agree + 37.5% agree) of the students felt it was difficult to find keypals, the Question 11 indicated that 66.67% (4.17% strongly agree + 62.5% agree) of the students felt it was difficult to keep up the correspondence. For example, S25, who received a reply from Korea by means of the MOVIE-SL discussion group, felt that it was difficult to continue the discussion with her partner because they often did not see the same movies. Sometimes partners terminated the communication without a clear explanation. Not receiving responses from their partners caused the students to lose interest in the project (S7, S8, S12, and S23).

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5.3.6 Challenge with technical aspects

Students had problems managing the technical aspects of the

computerized writing class. According to the survey data, many students had high anxiety toward new technologies. Question 24 showed that 79.16% (20.83% + 58.33%) of the students agreed that the computer lab class was more challenging. Question 18 showed that 54.16% (8.33% strongly agree + 45.83% agree) of the students felt frustrated when they couldn't figure out what to do in the computer lab. The interview results showed that 5 students (S4, S5, S9, S18, and S20) felt overwhelmed and frustrated by the complexity of computer and Internet usage. S8 questioned whether this course was a writing class or a computer class. S7 maintained that the computer was just a machine and she needed human contact for language learning. Three students (S6, S24 and S29) complained about the slow connection of the Internet and technical glitches that led to frustration. S13 complained that she did not have a computer at home to finish the work required. These responses indicate that many unfamiliar or unexpected logistical details need to be addressed before students can work comfortably in the computerized classroom.

5.3.7 Overall Impression of the Computerized Class

It is evident that, overall, students felt positive about the computerized writing class. Question No. 19 showed that they felt using the new technologies had helped them to develop confidence about their ability to write in English. (41.67% strongly agree + 37.5% agree). Question 36 indicated that 79.17% (29.17% strongly agree + 50% agree) of the students thought there were more advantages than disadvantages to working in the computer lab than in the traditional classroom. Question No. 37 showed that 83.33% (33.33% strongly agree + 50.00% agree) strongly preferred to having the class in the computer lab. Question No. 38 pointed out that 70.84% (29.17% strongly agree + 41.67% agree) were even willing to suggest the use of computer labs to other composition teachers

5.4 Feedback from the Teacher

In this section, the information source is the author's personal reflections about teaching the writing class in the computer lab.

5.4.1 Redesigning the Curriculum

Conducting the writing course in the computer lab meant a profound transformation of teaching materials and activities. The author browsed the Net to collect materials and to look for suitable internet-based activities. Due to the massive amount of information available, it was a painstaking process to screen, save, sort out, and finally structure the materials in compliance with the general framework of the curriculum. Compared to teaching in the conventional classroom, the author spent an average of four more hours preparing for the computerized class each week. In addition, a large portion of class time had to be dedicated to teaching students computer skills. For example, the author helped students learn some Internet applications during the first few weeks. As a result, the author felt that the time allowed for teaching writing per se was reduced.

5.4.2 Classroom Management in a Computer Lab

The teacher felt it more difficult to monitor student work in the computer lab. The computer lab in the university was set up so that, when looking at the class from the teacher's position, the students' faces are barely visible behind the computer screens. A few students also felt negatively about the physical setting of the computer lab. Six students (S2, S4, S6, S9, S11, and S29) argued that they could focus better on a lecture. S7 and S17 claimed that the teacher and students had better eye contact in the traditional classroom.

What was worse, since students had easy access to the Internet in the computer lab, they often logged on to e-mail, browsed the Web, chatted on BBS, or simply played network-based computer games while

the teacher was busy with other instructional activities. To solve this problem, the teacher adopted the strategy of walking around the classroom as she talked to the class. However, she still had to spend most of the time at the teacher's computer station in order to make demonstrations or to provide students with necessary explanations. The teacher's anxiety from not being able to sufficiently supervise the students caused her to speed up her pace when she addressed the class. She felt that she did not spend enough time explaining things as thoroughly as she would have in the traditional classroom. The interview results also indicated that four students (S2, S6, S7, S12 and S17) were worried that too much information was given in the computer lab and that, being overwhelmed, they just didn't have enough time to digest the materials.

5.4.3 Too Much Emphasis on Accuracy

When working on the telecommunication projects, students had inappropriate expectations toward the project and their partners. Some felt concerned that their keypal partners were not native speakers of English, because they were worried that they might learn English from "bad examples" (Interview Data, S1). Others expected that their partners would correct mistakes for them. Since it was not usual for partners to do so, these students felt that the project was not very useful. (Interview Data, S20, S22, and S30) The concerns might have to do with the accuracy focus that is often laid on our Taiwan students when learning English. They may need to be reminded that the main point of the project is to experience using the target language with an authentic audience in an authentic communication context, rather than to focus on correcting their grammar and vocabulary. If such authentic contact is established and continued, the problem of accuracy tends gradually to correct itself.

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5.4.4 Communicating Requirements to the Students

With the change of classroom context from conventional to computerized, it was a lot more difficult for students to comprehend

what exactly was required of them in the new environment. They had to learn the untraditional way of handing in assignments and revising their writings as well as working on telecommunication projects. The fact that many students did not even read the teacher's guidelines added more confusion and difficulties. Quite often the teacher was forced to give the same explanations or information over and over again. For example, although the author repeated several times the details of organizing project reports, some students were still confused as to what they should do. Despite the close connection of reading and writing, these students were not disposed to read.

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5.5 Discussion

Conducting the writing class in a computer lab, the author was mostly concerned about barriers to integrating the new technology into her existing curriculum. Indeed, using the computer lab seemed to make teaching more complicated and challenging; however, from the teacher's viewpoint, one could see that it was also advantageous because the computer provided an opportunity for the author to examine and review her teaching. Through the reflective process of redesigning the course and solving problems in the new teaching environment, the author gained an opportunity for personal and professional development.

However, due to the vast amount of time and energy that must be invested to establish a computerized writing classroom, it is also important to examine whether or not the effect of the technology-based instruction surpasses that of the traditional instruction. In this study, the responses from the students showed that conducting writing class in a computer lab was, to some extent, a worthwhile effort. However, with all the positive feedback of the computer-mediated instruction, it still must be recognized that these gains do not come without problems and limitations.

5.5.1 Telecommunication Projects

Many TESL-related resources advocate Internet-based projects and provide opportunities for teachers to work together over distances (Krause, 1989; Sayers & Kristin, 1987). Although there are many possible benefits from linking students in a target-language context to target-language sources outside of the language classroom, the author experienced difficulties in conducting the telecommunication projects.

She first considered finding a partner class and collaborating with a teacher in an English-speaking country. However, many existing reports about using telecommunication projects in writing classes revealed difficulties in maintaining communication with participating classes (Jan, 2000; Nielsen, 1998; Peha, 1995; Riel, 1995; Ritchey, 1997; Sugar & Bonk, 1998). Despite the author's several attempts, she failed to find a suitable class to work with due to problems of class size, student age, and course content. Therefore, she decided to assist the students in finding their keypals or subscribing to an existing electronic discussion list, in lieu of working with a partner class. Some students -- not surprisingly, in view of common Asian cultural reticences -- feared meeting partners through the Internet, and thus decided to limit their e-mails to communicating with friends or people they knew (S15, S17, and S22). S17 said, "It is difficult for me to make new friends on line and through e-mail… I don't like to talk about my life with strangers." (Interview Data)

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While working on telecommunication activities, students often felt overwhelmed due to a lack of management skills in coping with large amounts of correspondence. Further, the SL-LISTS discussion list limited incoming messages to 66 lines. Due to problems with the compatibility of our university e-mail server and the listserv provider, our students often got a response from the system that their short messages were over the line limit. As a result, their messages were rejected for posting. Both the teacher and the students felt frustrated about the time and effort spent and the difficulty of posting messages.

Finally, even strenuous efforts on the part of the students could not always ensure the success of the projects. In the keypal project, even though some students worked hard to keep up the correspondence, their partners stopped writing (S7, S8, S12, and S23).

Some of the difficulties can be attributed to the fact that the author let students choose pen pals or subscribe to on-line discussion on their own. Because the quality and quantity of students' learning experiences were not carefully controlled, the effect of the telecommunication projects was weakened.

In view of the various difficulties, it may not be necessary to put our students through the challenges of connecting with international email partners. Fabos and Young (1999) argue that the current research on the benefits of telecommunication projects has been contradictory and inconclusive and students often do not know how to work with peers within their own community before they are required to work with people overseas through telecommunication projects. It is advisable that teachers first engage students in communicating with their classmates by setting up a class emailing list or a family discussion list at a list provider, such as Yahoo. When students know how to communicate with peers within their community, teachers can introduce them to international telecommunication projects.

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5.5.2 Focus on Accuracy

It is worthy to thoroughly consider why so many of our EFL students should feel it is necessary to hang onto accuracy when communicating with their partners. Does this mean that our students cannot tolerate ambiguity in language learning? Do they have some misconceptions about language learning which lead them to so overly value accuracy over effective communication? Certainly it would not be an ideal situation if our students focused more on accuracy than communication or on communication to the neglect of accuracy. To help students benefit from computer room writing classes, it seems important to balance the amount of time spent on uninhibited communication and on micro-level

language skill development. Further, we may also need to persuade our students to believe that writing to non-native-speaking partners is just as beneficial in developing their proficiency level as writing to native speakers. Identifying the benefits of working with non-native-speaking partners could be important to changing our students' understanding of what English is as a worldwide phenomenon and what competence levels can be most beneficial to them.

5.6 Conclusion

Understanding and creating optimal language learning environments is the essential business of the language teacher. Computer-based technology can have significant implications for the teaching of English composition. This author's experience shows that there are several advantages to using computer and the Internet for EFL writing classes. Students were more motivated and they spent more time and generated more ideas for their writing. They could communicate with authentic audiences. There were more opportunities for them to interact with the teacher. However, a computerized classroom is more complicated and challenging for both the teacher and students. Utilizing new technologies certainly requires careful planning and implementation. By minimizing the challenges of computer-mediated teaching and learning, teachers can be more ready and confident to incorporate the new technology to create more communicative, authentic, and cooperative classrooms. Further, teachers must constantly examine the skills that are being developed and the experiences that students are having when engaged in computerized writing classes. Similar classroom-situated research is needed to help better design technology-based instruction and classroom activities as well as understand students' computer-mediated learning experiences.

Appendix 5.1: Survey Questions and Results

Question No.		Strongly Agree	Agree	Disagree	Strongly Disagree
1.	Before I took the course, I was afraid to use the computer.	8.33%	8.33%	41.67%	41.67%
2.	I did not know I could use Internet-based resources to improve writing skills.	20.83%	45.83%	16.67%	16.67%
3.	I did not know how to use list and discussion groups.	41.67%	41.67%	8.33%	8.33%
4.	I did not know how to find keypals on the Internet	20.83%	33.33%	29.17%	16.67%
5.	I did not know how to use on-line writing databases.	29.17%	37.50%	20.83%	12.50%
6.	I learned to subscribe to list groups and discussion groups.	25.00%	66.67%	8.33%	0
7.	I learned to find keypals on the Internet.	29.17%	62.50%	8.33%	0
8.	I learned to use on-line writing databases.	29.17%	45.83%	25%	0
9.	It was difficult to subscribe to and use list and discussion groups.	12.50%	41.67%	33.33%	12.50%
10.	It was difficult to find keypals on the Internet.	0	37.50%	29.17%	33.33%
11.	It was difficult to keep up correspondence with keypals partners.	4.17%	62.50%	25.00%	8.33%
12.	It was difficult to use on-line writing databases.	0	33.33%	50.00%	16.67%
13.	I found the discussion on the list groups interesting and stimulating.	8.33%	50.00%	37.50%	4.17%
14.	I found corresponding with keyapls is interesting and helpful in learning English.	29.17%	58.33%	12.50%	0
15.	I found the information on the on-line ESL and EFL writing databases helpful.	41.67	33.33%	16.67%	8.33%
16.	I was worried that I might damage the computer.	4.17%	8.33%	29.17%	58.33%
17.	I was worried that it would take me longer to learn to use computer-based technology than it would the other students.	8.33%	25.00%	25.00%	41.67%
18.	I feel frustrated when I can't figure out what to do in the computer lab.	8.33%	45.83%	25.00%	20.83%
19.	Using the new technologies has helped me to develop confidence about my ability to write in English.	41.67%	37.50%	16.67%	4.17%
20.	I plan to continue using the on-line ESL and EFL databases for my writing.	25.00%	58.33%	12.50%	4.17%

21.	I feel more confident in using the new technology to improve my writing skills.	33.33%	54.17%	12.50%	0
22.	I feel more nervous and pressured in the computer lab.	8.33%	20.83%	33.33%	37.50%
23.	The students are more supportive of each other in the computer lab.	12.50%	45.83%	25.00%	16.67%
24.	I find the class in the computer lab more challenging.	20.83%	58.33%	20.83%	0
25.	I feel there is more teacher/student and student/student interaction in the computer lab.	8.33%	75.00%	8.33%	8.33%
26.	I feel I get more individual attention from the teacher in the computer lab.	16.67%	45.83%	37.50%	0
27.	I can concentrate more on lectures in the computer lab.	4.17%	45.83%	37.50%	12.50%
28.	I feel I can participate more in class activities in the computer lab.	8.33%	70.83%	20.83%	0
29.	I generate more ideas for writing in the computer lab.	8.33%	70.83%	20.83%	0
30.	I spend more time on my writing assignments in the computer lab.	16.67%	70.83%	4.17%	8.33%
31.	I feel I get more feedback on my writing from the teacher in the computer lab.	25.00%	58.33%	16.67%	0
32.	I feel the materials used in the computer lab are more interesting and of more variety.	41.67%	54.17%	4.17%	0
33.	I feel the activities we did in the computer lab are more interesting and helpful.	29.17%	45.83%	20.83%	4.17%
34.	I feel the class in the computer lab is better organized.	20.83%	33.33%	37.50%	8.33%
35.	I feel more motivated working in the computer lab.	20.83%	50.00%	29.17%	0
36.	Overall, I think there are more advantages than disadvantages to working in the computer lab than in the traditional classroom.	29.17%	50.00%	20.83%	0
37.	I prefer to take classes in the computer lab.	33.33%	50.00%	12.50%	4.17%
38.	I would recommend composition course teachers to conduct the class in the computer lab.	29.17%	41.67%	20.83%	8.33%

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