

Experience-based Language Learning through Asynchronous Discussion

Chi-Fen Emily Chen 陳其芬

National Kaohsiung First University of Science and Technology
國立高雄第一科技大學 應用英語系

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Abstract

From a social-interactionist's view of language learning, "reflective conversation" via CMC, particularly through the asynchronous mode, has been advocated (Lamy & Goodfellow, 1999). It emphasizes learning through reflection on experience and through the exchange of thoughts with others. Guided by this pedagogical model, asynchronous discussion was implemented in an EFL content-based course taught twice in 2003 and 2004 that integrated learners' language learning experience with language learning theories. The study investigated the effectiveness of learning both content and language in this experience-based language learning course through asynchronous discussion and also examined the reflectiveness and interactivity of the participants' online exchanges. The results showed that most of the participants held a highly positive view on this CMC learning activity. Moreover, their reflectiveness in asynchronous discussions was found to be affected more by peer interaction than by the instructor's participation. Of particular interest is that the differences found among discussion groups revealed that the higher participation level the students had, the more positive view they held. This can be well supported by Wenger's social theory of learning emphasizing the importance of active participation.

Key Words: experienced-based learning, asynchronous discussion, computer-mediated communication, reflective practice, second language learning.

INTRODUCTION

Experience-based learning is not a new concept. It was first introduced by John Dewey in the 1930s, who claims that all learning, in a very basic sense, is from experience. If we encounter a new situation, we relate it to our own or others' experience of past similar situations. Experience-based learning, thus, emphasizes that experience is the foundation of, and the stimulus for, learning, and encourages learners to acknowledge and build on taken-for-granted processes which are often ignored in educational contexts. This model, different radically from the conventional knowledge-transmission model, places great emphasis on a participative, learner-centered, and constructivist approach (Boud, Cohen and Walker, 1993).

Experience-based learning is often through the practice of conscious reflection. In reflective practice, learners engage in a continuous cycle of self-observation and self-evaluation of their own actions and beliefs in order to refine their actions on an ongoing basis. Reflective practice has further been influenced by constructivism; thus, learning becomes an active, evolving process where learners reflect upon their current and past knowledge and experiences to generate new ideas and concepts (Kullman, 1998). The combination of reflective practice and constructivism has encouraged an increasing use of the experience-based learning model in all disciplines, including language learning.

In second or foreign language learning, a common reflective practice based on the experience-based learning model is dialogue journal writing. This practice allows learners to re-examine and make sense of their experiences and then to carry on a reflective, written conversation with the teacher on a regular basis. The teacher is primarily a participant in this written conversation who responds to the content that learners have written, rather than an evaluator who corrects or comments on the form of their language use. Dialogue journals not only open new channels of communication, but they also provide a natural context for language development (Peyton & Staton, 1993; Peyton, 2000). Moreover, dialogue journals can also be used to encourage learners to explore and reflect on their own language learning processes and experiences, which can help them to increase awareness of their language learning and promote learner autonomy (Benson & Voller, 1997; Matsumoto, 1996).

Much literature has been documented to support the value of the reflective practice through dialogue journal writing in language learning and teaching (e.g., Holmes & Moulton, 1997; Mlynarczyk, 1998; Peyton & Staton, 1993; Reid, 1997). However, there are some limitations in the use of dialogue journals for experience-based language learning. One clearly seen limitation is that a learner's journal is usually read by only one person – the teacher. Thus, the experience written in the learner's journal cannot be shared with and learned by other learners. It is a pity that dialogue journal writing is unable to provide opportunities for learners to develop multiple perspectives by learning from others' experiences.

From a social-interactionist's view of language learning, "reflective conversation" via computer-mediated communication, particularly through the asynchronous mode such as email and discussion forums, was advocated by Lamy and Goodfellow (1999). The purpose is to provide a more interactive language learning environment for learners not only to reflect on but to exchange their experiences with multiple participants. Since the asynchronous medium offers both one-to-one and one-to-many communication channels, such reflective conversation in cyberspace can allow multiple stories and multiple points of view to be shared and exchanged among learners at almost any time. Therefore, the use of the asynchronous medium appears more suitable than the use of dialogue journals, especially in experience-based learning.

The use of asynchronous discussion forums (also called bulletin/message boards or conference rooms) is also considered more appropriate for reflection on meta-linguistic issues than synchronous media such as online chat rooms (Lamy & Goodfellow, 1999; Weasenforth et al, 2002). It provides a time- and place-independent interactive writing space where learners can ponder and compose messages at their own pace and they can also produce either monologue- or conversation-like forms of written messages for reflective and communicative practice. Studies in asynchronous communication have found that it promotes careful deliberation over course content, enables students to take responsibility for their own learning, and encourages critical thinking as students construct their own knowledge (Biesenbach-Lucas, 2003; Chong, 1998; Kahmi-Stein, 2000; Sengupta, 2001; Weasenforth et al, 2002). Further, these studies have also shown that the interactive and collaborative nature of asynchronous technology allows students to gain socio-affective benefits, including sharing perspectives and experiences, establishing relationships, supporting and encouraging each other, and seeking assistance from each other. One very important advantage is that this medium allows everyone's voice to be heard, including those who do not normally participate in face-to-face class discussions (Kahmi-Stein, 2000).

For non-native speaking students, the use of asynchronous discussions promotes their development of English language skills and also increases more participation compared to that in face-to-face class situations (Kahmi-Stein, 2000; Lamy & Goodfellow, 1999; Warschauer, 1998). It suggests that asynchronous communication may be a better medium for non-native students to overcome their linguistic limitations and to develop their critical thinking abilities in the target language (Biesenbach-Lucas, 2003). On the other hand, a number of studies found dissatisfaction for non-native students learning through asynchronous discussion. Since this activity requires written language output from students, some of them feel that they cannot express complex thoughts well in the written form due to their limited linguistic ability (Lang, 2000). In addition, asynchronous discussions can be perceived as burdensome busywork and fail to prompt meaningful communication, particularly if they are not well integrated into a curriculum or a course design (Chong, 1998; Stepp-Greany, 2002).

The use of asynchronous discussion forums, either as an additional channel to a face-to-face class or as a required component in an online class, changes the roles of instructors and students; however, its effectiveness in education, including language learning, is inconclusive. In fact, every new technology creates new possibilities for more effective learning, but the technology itself does not guarantee that effective learning is bound to happen. A crucial issue that has risen around language learning via computer-mediated communication is for what purpose and in what ways it can be effectively integrated into the curriculum and the course work. Moreover, though researchers and educators generally agree that asynchronous communication adds to students' learning in new and significant ways, it is probably be better viewed as a

“supplement”, not necessarily a “substitute” for other traditional, but effective, class activities (Weasenforth et al, 2002).

THE STUDY

The study presented in this paper is a two-year exploratory study of two large university EFL content-based classes where asynchronous discussion forums were set up for experience-based language learning. The study used action research methodology; I was both the instructor of the two classes and the investigator of the study. This study is unique because the course content and the instructional approach of the two classes were the same, but the requirements for the students to participate in the discussion forums and the instructor’s participation differed between the two classes. The study compared not only the differences between the two classes but also the differences among groups in each class. Specifically, this study investigated 1) the reflectiveness and interactivity of peer exchanges in the asynchronous discussion forums, 2) students’ perceived effectiveness in learning content and language through asynchronous discussion, 3) their attitudes toward asynchronous discussion, 4) the influence of peer interaction in students’ participation in this activity, and 5) the influence of the instructor’s participation in the discussion forums and students’ need for that.

CONTEXT

The Course

The course chosen for the implementation of asynchronous discussions was a content-based EFL course entitled “Foreign Language Learners” (i.e., an introductory course to Second Language Acquisition). This course was offered as a required one with 3 credits to third-year students in the English department at a national university of science and technology in Taiwan in fall 2003 and fall 2004. It lasted for an 18-week semester with 3 hours of face-to-face classroom teaching each week. This course covered major theoretical approaches to second/foreign language learning and explored factors affecting language learning. The objectives were twofold: 1) to develop students’ fundamental understanding of how a second/foreign language is learned; and 2) to increase their awareness of their own language learning processes and to help them develop effective strategies for their language learning. The ultimate goal for students to take this theory-oriented course was to become more successful language learners by integrating theory into practice. The experienced-based language learning model, therefore, was well suited for this course.

The Students

The students who took this course were third-year English majors, but they were from the two-year upper-class program. That is, they were new students on campus and

did not know each other at the beginning of the course. There were 41 students enrolled in the class of fall 2003 and 35 students in the class of fall 2004. All of them were full-time students and showed a high-level motivation in studying English. They all had experiences of writing in English or Chinese with the computer, but participating in asynchronous discussion forums was new to most of them; only four students in the 2004 class had such an experience before taking this course.

The Asynchronous Discussion Activity

Asynchronous discussion forums, set up on the Nicenet ICA (Internet Classroom Assistant) (URL: <http://www.nicenet.org>), were implemented for this course from the beginning of each semester. The Nicenet ICA is a web-based classroom environment providing teachers and students online forums to collaborate and share ideas and information. It is free for everyone to use and requires only a web browser and a connection to the Internet.

The forums were private and only the students enrolled in this course had access to them, which allowed the students to express themselves more freely. All the discussion questions were designed in accordance with the topics and issues covered in the course. The discussion forums provided an interactive communication channel through which the students shared their foreign language learning experiences with one another and used these experiences to further support or criticize the language learning theories that they had learned in class.

The students in each class were randomly assigned to four groups (8 to 11 students in each group) for the online discussions. They were asked to talk about their language learning experiences or thoughts in response to my questions in their assigned groups and then to give feedback, either comments or questions, to their members' postings in their own group forums. The purpose of dividing the class into smaller groups was to ensure that each student received sufficient attention from his/her group members in online discussion and that the amount for the students to read each other's weekly postings was not overloaded.

The requirement for the 2003 class to participate in the asynchronous discussion activity, however, differed from that for the 2004 class in several ways. There were twelve discussion topics created for the 2003 class. The students were required to discuss a new topic almost every week: they had to write one response to my questions on a particular topic and give feedback to at least two of their group members' postings that they were interested in. This weekly assignment appeared to be too heavy for them, so that some students only responded to my questions but ignored the discussion part with their peers. In order to increase more interactivity among students in the online discussions, only eight topics were chosen for the 2004 class. Moreover, the students were given two weeks to discuss each topic: they wrote their responses to my questions in the first week and gave feedback to their group members' postings the next week. By

doing so, the students were given more time to exchange, rather than merely to present, their ideas and experiences.

Another big difference was the role I played in the asynchronous discussion activity as an instructor. I participated in the students' discussions in the 2003 class more actively than I did in the 2004 class. I usually gave about 2 to 5 replies to each group on every topic in the 2003 class, asking more questions to show my interests, giving compliments and encouragements, providing suggestions and corrections when necessary, and also sharing my own language learning experiences with them. My purpose was to set a good example of an online discussion participant as well as to let the students know I cared about what they said in the forum. In contrast, I seldom participated in the students' forum in the 2004 class. Instead, I made my general comments and highlighted important points of their online discussions when meeting them in class face-to-face, and I also sent personal emails to some students when I felt a need to clarify a misconception or to correct a serious language mistake. I would also like to see whether the different ways I participated in the students' asynchronous discussions affected their participation and performance in this activity.

DATA COLLECTION AND ANALYSIS

Data included the transcripts of the two classes' asynchronous discussions on all topics, the students' responses to the end-of-the-course questionnaire, and two focus group interviews with the students from each class. Both quantitative and qualitative analyses were employed. By using multiple data sources and analyses, I was able to validate and cross-check the findings as well as to uncover some hidden factors.

The descriptive statistic analysis was employed to evaluate the students' participation level in the asynchronous discussions in terms of 1) reflectiveness: the rate of their responses to the instructor's questions in each topic and the length of each response, and 2) interactivity: the number of replies they sent to their group member's postings in each topic and the length of each reply. The results of their participation level were then compared among groups. The content of their responses was not analyzed in this study; however, many of the responses served as evidence that validated and supported the findings from the questionnaires and the focus group interviews.

Most of the questions asked in the questionnaire for the 2003 class were the same as those for the 2004 class. They were primarily designed to obtain students' perceived effectiveness of doing the asynchronous discussion activity in helping their learning of the course content and the English language. Also, the students were asked to rate their own performance and their group performance in online discussions, their attitudes toward this activity (including fondness and suitability), the peer influence on their participation, and the need for the instructor to participate in their discussion forums. In addition, they were asked to self-report what factors affected their asynchronous

discussion performance and in what ways. One student in the 2004 class did not give back the questionnaire; therefore, 34 responses from the 2004 class and 41 from the 2003 class were used for analysis.

Moreover, two semi-structured focus group interviews with the student from each class were conducted after the course had ended. The two chosen groups were the one performing the best in the 2003 class and the one performing the best in the 2004 class. The students from the two best groups were invited to participate in the interviews voluntarily. Seven students from the first group and nine students from the second agreed to be interviewed. Each focus group interview lasted approximately one hour. The participants were asked to recall how they felt and thought about doing the asynchronous discussion activity and to explain what reasons were behind their viewpoints and performance. The two focus group interviews were audio-taped and then transcribed and analyzed with consent.

RESULTS AND DISCUSSION

Participation Level

The students' participation in the asynchronous discussions differed not only in classes but also in discussion groups. Their participation level was evaluated in two aspects: 1) their responses to the instructor's questions (i.e., reflectiveness) and 2) their feedback given to their group members' postings (i.e., interactivity).

Table 1 shows that the 2004 class performed better than did the 2003 class in terms of response rate (97% vs. 92%) and length (323 words vs. 253 words per response). Moreover, group differences were found in both classes, particularly in response length. In the 2003 class, group C performed the best (95% response rate and 331 words per response). In the class 2004, groups A and B performed better than the other two groups (both 100% response rate and over 350 words per response).

Table 1
Students' Responses to the Instructor's Questions (Reflectiveness)

		Group A	Group B	Group C	Group D	Mean
2003 Class (N=41)	Response rate per topic	92%	85%	95%	95%	92%
	# of words per response	265	204	331	210	253
		Group A	Group B	Group C	Group D	Mean
2004 Class (N=35)	Response rate per topic	100%	100%	89%	100%	97%
	# of words per response	354	368	285	284	323

Table 2 shows that the students of the 2004 class gave more replies to their group members' postings per topic (2.93 replies per student) and wrote longer (95 words per reply) replies than did the students of the 2003 class (1.45 replies per student and 88 words per reply). That is, the interactivity level of the 2004 class was higher than that of the 2003 class. Also, group differences were found again. In the 2003 class, group C performed the best, particularly in the length of their replies (120 words per reply). In the 2004 class, groups A sent the most replies to their members (3.68 replies per student), and group B wrote the longest replies (138 words per reply) but sent the least replies to their members (2.46 replies per student).

Table 2
Students' Replies to their Group Members' Postings (Interactivity)

		Group A	Group B	Group C	Group D	Mean
2003 Class (N=41)	# of replies per topic per student	1.55	0.77	1.78	1.69	1.45
	# of words per reply	83	64	120	83	88
		Group A	Group B	Group C	Group D	Mean
2004 Class (N=35)	# of replies per topic per student	3.68	2.46	2.63	2.94	2.93
	# of words per reply	105	138	72	66	95

The differences in the participation level between the two classes can be accounted for by a more flexible requirement set for the 2004 class: they were allowed to discuss a topic for two weeks, i.e., writing a response to my questions in the first week and sending feedback to their peers' postings in the second week, whereas the 2003 class had to do the two tasks in one week. This reveals that students need to be given sufficient time to do online discussions; otherwise, a high level of interaction among students can hardly occur.

From the questionnaire data, we can see that the students rated their own performance in online discussions also differently in groups. The result of their self-evaluation of their performance (see Table 3) corresponded with the findings in their participation level. In the 2003 class, the students in group C rated their performance the highest; in the 2004 class, group B rated the highest and group A rated the second highest. It suggests that the longer responses the students wrote to the instructor and their peers, the higher they rated their online discussion performance. However, the interactivity, assessed by the number of replies the students sent to each other, did not appear to be the most important criterion for their self-evaluation. As shown above, group A in the 2004 class had the highest level of interactivity, but their self-rating of their own performance was not the highest. The factors contributing to the group differences will be discussed

later when more findings are shown.

Table 3
Students' Self-Evaluation of Their Performance

	Group A	Group B	Group C	Group D	Mean
2003 Class (N=41)	3.45	3.15	3.78	3.50	3.47
	Group A	Group B	Group C	Group D	Mean
2004 Class (N=34)	3.71	3.89	3.00	3.61	3.56

*on a scale ranging from 1 to 5

Perceived Effectiveness

A) Learning of Content

The students' self-evaluation of the effectiveness of using the asynchronous discussion activity to enhance their learning of the course content indicates that 81% of the students in the 2003 class and 91% of the students in the 2004 class held positive views (including "strongly agree" and "agree", see Table 4). The mean of each class's perceived effectiveness in content learning further shows that the 2004 class gave a higher evaluation (M=4.18) than did the 2003 class (M=3.93).

Table 4
Students' Perceived Effectiveness in Content Learning

	SA	A	N	D	SD	Mean
2003 Class (N=41)	8 (20%)	25 (61%)	7 (17%)	1 (2%)	0	3.93
2004 Class (N=34)	10 (29%)	21 (62%)	2 (6%)	1 (2%)	0	4.18

*SA (5): strongly agree; A (4): agree; N (3): neutral; D (2): disagree; SD (1): strongly disagree

The qualitative data from the students' responses in the questionnaires and the focus group interviews reveal how and why this activity helped them learn the course content more effectively. The findings can be categorized into the following six aspects. Examples of students' actual responses are provided.

1) Gaining multiple perspectives and experiences

"Sometimes our thoughts are too narrow and limited. The online discussions helped us to know different opinions and experiences from our classmates. It broadened our viewpoints and made us see things more clearly and deeply."

"From the online discussions, I learned many different views about the same theory. I also knew others' experiences of learning languages. This helps me know that there are so many ways, not just only one way, to learn a language well."

2) Developing critical thinking ability

“It’s interesting to criticize these language learning theories though it’s not easy. I’ve learned that right things are not always right and they can be wrong in some cases. I learned how to think more critically by doing online discussions.”

3) Constructing new knowledge

“Looking back at what I did in online discussions, I’m so proud that I can ‘create’ my own ideas in every theory, just like an expert. Now I realize that a human being’s potential is unlimited.”

4) Enhancing understanding of the course content

“When I missed some points Professor Chen taught or I didn’t understand something she said in class, I could easily get answers in the online forum by asking my group members or reading the messages they posted.”

5) Reviewing the course content constantly

“Doing online discussions forced me to review the lessons the professor taught in every class. If I didn’t do the reviewing, it’d be impossible for me to participate in online discussions. So, it did help me to form a good study habit.”

6) Motivating learning of the course content

“The online discussions motivated my interest in studying this course. The theories are never boring to me because we applied them to our real-life experiences. We enjoyed sharing and reading each other’s experiences.”

B) Learning of Language

The students’ self-evaluation of using the asynchronous discussion activity in helping them learn the English language was not as high as that in helping them learn the content. Approximately 70% of the students in both the 2003 class and the 2004 class held the positive views (including “strongly agree” and “agree”, see Table 5). The means of the two classes in this part were about the same ($M \approx 3.8$).

Table 5
Students’ Perceived Effectiveness in Language Learning

	SA	A	N	D	SD	Mean
2003 Class (N=41)	6 (15%)	23 (56%)	10 (24%)	2 (5%)	0	3.79
2004 Class (N=34)	7 (21%)	16 (47%)	9 (26%)	2 (6%)	0	3.77

*SA (5): strongly agree; A (4): agree; N (3): neutral; D (2): disagree; SD (1): strongly disagree

The students' self-reports in the questionnaires and the interviews show that this online discussion activity helped them improve their English learning in three main aspects. Examples of the students' self-reports in terms of language learning are given.

1) Improving written communication skills in terms of clarity, organization, logical thinking, style, and fluency

“When I got a question or a comment in the online discussions, I had to write as clearly as I could to make my classmates understand what I meant. This way helped me sharpen my organization and communication skills.”

“I learned how to write more logically from reading other students' postings. I also learned different writing styles.”

“It seems that I can write a lot of ideas without taking too much time now. I found the writing practice in online discussions helped me express myself more easily and write my thoughts more fluently.”

2) Expanding vocabulary

“I've learned many words and expressions that I hadn't known from reading my classmates' postings.”

“Since I had to use English to write my online responses, I needed to use dictionary very often and thus helped me learn to use some new words.”

3) Increasing assurance in language learning

“The best part about doing online discussion was that reading my classmates' postings often made me feel ‘I'm not alone’ in the English learning process. Before taking this course, I didn't know how other students learned English. Through the sharing in the discussions, I found many of us had similar learning experiences. And this helped me learn English and other foreign languages with more assurance.”

However, a number of students also pointed out why they did *not* think that this activity could improve their language learning, particularly in writing. There are two major reasons: 1) the online discussions focused on meaning rather than form; therefore, many students did not pay careful attention to their grammar or they were not even aware of their grammatical mistakes; and 2) the students were afraid that their use of English would be “Taiwanese-English” and some inappropriate use of English would become fossilized since they used English to communicate with their Taiwanese peers. These two problems, in fact, are likely to happen in any foreign language class where the students have the same linguistic and cultural background and the emphasis is placed on communicative language learning. In order to have more exchanges of reflections and viewpoints from students in discussion forums, it is often the case that both the instructor and students give more attention to the meaning than the form of their language output in

the CMC learning environment. One thing worth noting is that the students did negotiate meaning in the target language when the message they sent out was unclear or incomprehensible to their peers.

C) Group Differences in Perceived effectiveness

The students' perceived effectiveness of doing the asynchronous discussion activity in enhancing content learning and language learning differed among groups in both classes. As shown in Table 6, in the 2003 class, group C's ratings in content learning and language learning were far higher than the other three groups' (4.20 and 4.14); in the 2004 class, group A's rating in content learning was the highest (4.67) and group B's rating in language learning was the highest (4.11).

Table 6
Students' Perceived Effectiveness – Group Comparison

		Group A	Group B	Group C	Group D	Mean
2003 Class (N=41)	Content Learning	3.77	3.75	4.20	4.00	3.93
	Language Learning	3.42	3.74	4.14	3.85	3.79
		Group A	Group B	Group C	Group D	Mean
2004 Class (N=34)	Content Learning	4.67	4.11	4.00	3.86	4.18
	Language Learning	4.00	4.11	3.44	3.71	3.76

*on a scale ranging from 1 to 5

Comparing this result with what were shown in Tables 1 and 2, we can find that groups whose participation level was higher tended to rate the effectiveness higher as well. Moreover, the correlation analysis of these findings also suggest that groups whose interactivity level was higher (e.g., group A in the 2004 class) tended to perceive higher effectiveness in content learning ($r=0.78$), whereas groups who produced longer responses (e.g., group B in the 2004 class) tended to perceive higher effectiveness in language learning ($r=0.93$). This is probably because higher peer interactivity, i.e., more input and feedback exchanged by each other, may help students comprehend and apply the content knowledge more easily, whereas longer responses, i.e., more English writing practiced by students, may make them feel that they have made more progress in their English learning.

Attitudes toward Asynchronous Discussion

The students' attitudes toward the asynchronous discussion activity were evaluated by 1) the fondness for doing this activity as an additional learning channel and 2) the suitability of doing this activity in this course (for the 2004 class only).

Table 7 shows that approximately 50% of the students in both classes liked to do this activity and less than 10% disliked it. Although the fondness level was not quite high in both 2003 class and 2004 class ($M_{2003 \text{ class}}=3.39$; $M_{2004 \text{ class}}=3.47$), the suitability rated by the 2004 class was very high ($M_{2004 \text{ class}}=4.40$). 91% of the students considered the asynchronous discussion activity suitable for this course.

Table 7
Students' Attitudes toward the Asynchronous Discussion Activity

		SA	A	N	D	SD	Mean
2003 Class (N=41)	Fondness	2 (5%)	18 (44%)	17 (41%)	3 (7%)	1 (2%)	3.39
2004 Class (N=34)	Fondness	1 (3%)	16 (47%)	15 (44%)	2 (6%)	0	3.47
	Suitability	17 (50%)	14 (41%)	3 (9%)	0	0	4.40

*SA (5): strongly agree; A (4): agree; N (3): neutral; D (2): disagree; SD (1): strongly disagree
 **"Suitability" was not asked in the questionnaire given to 2003 class but only in the one given to 2004 class.

This result is not too surprising. Since participating in asynchronous discussions really takes time and effort, students usually do not like to do such a heavy assignment. However, doing this activity provided them with many benefits, as they reported in the questionnaires and interviews, such as helping them better understand the course content, practicing thinking and writing in English, gaining different experiences and perspectives, increasing more opportunity to interact with others, and sharing and posting ideas conveniently. This can also explain why the students highly rated the suitability of this activity for this course even though only half of them liked it. In fact, quite a few students expressed a mixed feeling about doing this activity, as one student said,

"It was a feeling of sweet bitterness. At the beginning I really hated to do this activity; it was too time-consuming. But once I got used to it, I started to like it. Every time after I posted something on the Nicenet, I was eager to see if any of my group members replied to me. Now when I look at what we did in online discussions, I feel so proud and I've got a strong sense of achievement. But if you ask me if I'd like to do it again in another course, I guess I'll probably say no."

Another finding worth noting is the group difference in attitudes toward this activity. As shown in Table 8, the groups who had the highest degree of fondness were group C in the 2003 class and group A in the 2004 class, and group A also rated the suitability the highest. These two groups were the ones whose interactivity level was the highest (see Table 2). This can imply that peer interaction in the online learning environment may have a strong relationship with students' attitudes, including interest and belief, toward the asynchronous discussion activity. More about the influence of peer interaction will be discussed in the next section.

Table 8
Students' Attitudes toward the Asynchronous Discussion Activity –
Group Comparison

		Group A	Group B	Group C	Group D	Mean
2003 Class (N=41)	Fondness	3.15	3.02	3.79	3.63	3.39
		Group A	Group B	Group C	Group D	Mean
2004 Class (N=34)	Fondness	3.67	3.44	3.22	3.47	3.47
	Suitability	4.78	4.33	4.33	4.14	4.40

*on a scale ranging from 1 to 5

Peer Influence

Peer influence was determined by asking the students to rate the level of influence of their group members' participation in the asynchronous discussions on their own participation. Table 9 shows that 71% of the students in the 2003 class and 76% of the students in the 2004 class thought that they were influenced by peer participation, or more specifically, peer interaction. Also, the rating of peer influence on students' participation for the 2003 class was 3.78 and that for the 2004 class was 3.91. The slightly higher percentage and higher rating found in the 2004 class is found to be associated with their higher level of interactivity than that of the 2003 class (see Table 2). That is, students who view peer influence more strongly on their participation tend to interact with one another more frequently.

Table 9
Peer Influence on Students' Participation

	SA	A	N	D	SD	Mean
2003 Class (N=41)	8 (20%)	21 (51%)	7 (17%)	5 (12%)	0	3.78
2004 Class (N=34)	8 (23%)	18 (53%)	5 (15%)	3 (9%)	0	3.91

*SA (5): strongly agree; A (4): agree; N (3): neutral; D (2): disagree; SD (1): strongly disagree

Many of the students pointed out in the questionnaires that their peers' responses motivated them to participate in the discussions more actively. The more responses their group members posted on the Nicenet, the more they were willing to participate. Some even mentioned that it was a kind of peer pressure that made them feel a strong need to do as well as did their group members.

Comparing each group's rating of peer influence on their individual participation, we can find that group C in the 2003 class (4.13) and group A in the 2004 class (4.33) had the highest scores again (see Table 10). This finding further supports the view that peers' participation in online discussion forums plays a crucial role in affecting individual

student’s participation. It suggests that the more peer influence students feel, the higher level of participation and interactivity they demonstrate in their groups.

Table 10
Peer Influence on Students’ Participation – Group Comparison

	Group A	Group B	Group C	Group D	Mean
2003 Class (N=41)	3.75	3.48	4.13	3.92	3.81
	Group A	Group B	Group C	Group D	Mean
2004 Class (N=34)	4.33	4.11	3.56	3.57	3.91

*on a scale ranging from 1 to 5

The interviews with the two focus groups (group C in the 2003 class and group A in the 2004 class) further revealed two different stories of how peer interaction in their group influenced their own participation in online discussions.

The students in group C attributed their great performance in online discussions to one particular member, Jason (a pseudonym), who they regarded as both a group leader and a big brother. Jason was about ten years older than his group members and had many years of English teaching experience to children before entering this two-year upper-class program. He was the one who normally wrote the longest responses to my questions and sent the most replies to his group members. In the interview, he kept emphasizing the importance of “sharing”. He said that what he did was to share as much as he could with his group members in each discussion topic and to encourage them to share as well. Many of the students in this group commented that they really liked to read what Jason wrote to them because his feedback showed that he always read their online responses with interest and his words were full of personal touch. Jason’s great sharing and enthusiastic participation had a tremendous impact on the other members; they interacted more and more closely and frequently with each other and created a warm, supportive atmosphere in their discussion forum. It was evident that Jason played a crucial role in motivating his group members’ participation and helping to establish a strong sense of learning community.

Unlike group C in the 2003 class, group A in the 2004 class did not have such a special member like Jason. Their excellent peer interaction was due to everyone’s active participation right from the beginning to the end. There were four important factors contributing to this group’s enthusiastic participation. First, they perceived a very high level of their group members’ participation. They deemed that every one in this group did a great job in their discussions, which made them want to do the same. The self-evaluation data from the questionnaires also indicate that this group’s rating of their members’ participation in online discussions (4.56) was remarkably higher than the other three groups’ (M=3.71). Second, they received ample attention from each other. This can

be evidenced by the frequent replies they received and sent to each other. One noteworthy finding was that no student in this group got no reply in every discussion topic. Some of them mentioned that they would particularly choose to write feedback to those who had not yet gotten a reply. Third, they raised questions more often than did they give comments in their replies to each other. The advantage of asking questions was to stimulate more exchanges of ideas and opinions, thus encouraging more interaction among them. Fourth, they received a positive reinforcement from my occasional compliments on their performance. Some said that it was the praise I gave to them in a face-to-face class meeting that made them aware of their superior performance. My compliments, thus, became an incentive for them to do even better in this activity.

In fact, the students of group C in the 2003 class also pointed out the influence of the instructor's compliments on their performance in addition to peer compliments. Both groups mentioned that they wanted to keep being the number one groups after having heard my compliments. More details about the instructor's role in the students' asynchronous discussion forum will be discussed next.

The Instructor's Participation

The role I played in the two classes' asynchronous discussion forums was not the same. As stated earlier, I participated in the students' discussions in the 2003 class more actively than I did in the 2004 class. In fact, I rarely made comments or raised questions in the 2004 class's group forum, but I sometimes sent personal emails to the students when I felt a need to clarify a misconception or to correct a serious language mistake. From the above findings in Tables 1 and 2, we can see that the performance of the 2004 class was even better than that of the 2003 class in average. Moreover, another interesting finding was that in the 2003 class, group C, who had the best performance, did not receive my feedback the most, whereas group B, who often had the poorest performance, received my feedback the most. However, my encouragement did not seem to greatly improve their performance and neither did my questions stimulate more of their discussions. These findings suggest that the way the instructor participates in the students' discussions does not seem to affect students' performance to a considerable degree.

However, when the students were asked to rate the need for the instructor to participate in the asynchronous discussion forum, 66% in the 2003 class and 62% in the 2004 class felt a need for the instructor participation, but the means of the two classes' ratings on this need were not very high ($M_{2003 \text{ class}}=3.76$; $M_{2004 \text{ class}}=3.62$, see Table 11). A further comparison of each group's rating in this part does not show much difference. They all rated similarly (see Table 12).

Table 11
Students' Perceived Need of Teacher Participation

	SA	A	N	D	SD	Mean
2003 Class (N=41)	8 (20%)	19 (46%)	10 (24%)	4 (10%)	0	3.76
2004 Class (N=34)	4 (12%)	17 (50%)	9 (26%)	4 (12%)	0	3.62

*SA (5): strongly agree; A (4): agree; N (3): neutral; D (2): disagree; SD (1): strongly disagree

Table 12
Students' Perceived Need of Teacher Participation – Group Comparison

	Group A	Group B	Group C	Group D	Mean
2003 Class (N=41)	3.68	3.63	3.85	3.88	3.76
	Group A	Group B	Group C	Group D	Mean
2004 Class (N=34)	3.67	3.44	3.67	3.70	3.62

*on a scale ranging from 1 to 5

Based on their actual experience of receiving feedback from me in the online discussions, many of the students from the 2003 class pointed out that the instructor's participation had many advantages, such as motivating students to discuss more deeply and more enthusiastically, making them fully aware that the instructor gave attention to their responses, increasing their confidence in expressing themselves, checking if their thoughts were on the right track, and functioning as a monitor that helped to ensure their response quality, yet a small number of them mentioned that they got more pressure from my feedback and wished not to receive it.

The students from the 2004 class, though seldom getting feedback from me, expressed their views similar to those of the 2003 class. One student even commented that students would not feel it was just an assignment if the instructor participated in their online discussions. However, some students also pointed out that the instructor could serve as an observer and give oral feedback in class just as what I did to them. They said that they knew I was reading their discussions because I often talked about what they said when meeting them face-to-face in class; therefore, there was no need to give them online responses.

As an instructor, I do know these advantages and disadvantages that the students reported in their views of the instructor participation in students' online discussion forums. Yet, there is a serious factor that an instructor probably needs to take into more consideration: time. Though I wish I could give every student an individual online reply on every topic, it is not possible to do so in reality due to the limited time I have. In order to use time more efficiently while attaining the same expectation level, I found that giving general feedback in face-to-face class meetings would be good enough. The

results show that the students in the 2004 class performed well without my active participation in their discussion forums. Moreover, this way can help students to develop a stronger sense of learner-centeredness and learn to construct knowledge on their own. What an instructor needs to do the most is probably to encourage more peer interaction and to assure students of the value of doing this kind of socio-constructive learning activity.

CONCLUSIONS

In general, the implementation of asynchronous discussion forums in this experience-based language learning course was a success in both the 2003 class and the 2004 class. One important finding was the 2004 class's remarkably high rating of suitability of doing the asynchronous discussion activity in this course. Moreover, from their verbal report as to how this activity helped them enhance the learning of the course content, we can conclude that asynchronous discussion is an excellent technology that facilitates experience-based learning since it greatly helps students to increase awareness of language learning, develop critical thinking skills, construct new knowledge, gain multiple perspectives, and even motivate higher interest in the course content. In terms of the effectiveness in language learning, though the students' ratings were not very high, most of them still held positive views. In addition to their perceived improvement in their writing skills, some particularly pointed out that the greatest benefit they got from doing this activity was the feeling "I'm not alone" , thus giving them strong assurance in learning language.

The differences found between the two classes have several positive implications. Compared to the 2003 class, the 2004 class had fewer discussion topics; that is, more time was given for the discussion of each topic. The result shows that the 2004 class's participation level, particularly in terms of interactivity, was much higher than that of the 2003 class. This indicates that an appropriate level of students' workload in doing this activity definitely needs to be taken into consideration. The level of workload may affect students' willingness to participate in this activity and their performance as well. Furthermore, the 2004 class also perceived a much higher degree of effectiveness of using asynchronous discussions for content learning. This may suggest that the higher participation level, the higher satisfaction level. Participation and satisfaction can have a strong two-way interactive influence on each other.

The most interesting findings in this study were group differences found in the two classes and the factors contributing to the differences. The students in the two best groups found in each class had different peer interaction patterns. The success of one group was due to a special member's excellent leadership and sharing, while the success of the other group was accomplished by a collective effort influenced by peer participation. Also, since the two groups had the highest participation level, they rated every item almost the

highest in their respective class. This again suggests that participation, satisfaction, and attitudes all interact with one another. In other words, in online learning environment, one's cognitive performance is likely to be affected by, and in turn affect, one's socio-affective state and their group cohesiveness.

As to whether the instructor needs to participate in students' asynchronous discussion forums and what kind of teacher participation is the most effective, these questions are not easy to answer and may not have absolutely right answers. From this study, we can see that although the students in both classes rated quite high in the need for teacher participation, they did not seem to perform better with my participation and neither did they seem to perform worse without my participation. Yet, one thing I can be sure is that they were fully aware of my existence in their forums even though I didn't voice a word. Probably my role was just like what a student said: a "monitor". In fact, the primary goal of their participation in the discussion forums was not merely for me to see or evaluate, but for them to share, support, assist, and collaborate with one another. Another point worth mentioning is that this course, unlike other completely online courses, still had regular face-to-face class meetings in addition to asynchronous discussion; thus, I could choose to give oral feedback in the real classroom setting and let them know immediately I cared about their online discussions.

Finally, the findings in the study can be further supported by Wenger's (1998) "social theory of learning"; that is, knowing requires active participation in social communities. According to his model, learning involves meaning negotiation and finding, mutual engagement in action, community building, and identity construction. These four tasks have to be carried out together with the member of the same community in order to make knowing happen. Wenger's theory can explain why some groups in this study performed superiorly well and some did quite poorly from the perspective of participation. Participation needs to be promoted as well as sustained socially. The key issue is whether and how a sense of learning community is established and sustained. Further research is needed to investigate how group members build their online learning community and form their group identity while examining how they negotiate for meaning and engage in action in doing this activity as a group, or more specifically, as a learning community. More detailed qualitative analysis (through content analysis or discourse analysis) of the students' postings is needed in order to gain deeper insight into how they actually participate in such an asynchronous learning activity and interact with one another.

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