CHAPTER 5
CONCLUSION

5.1 Introduction

While the chief executive of one Internet-based company, when commenting on the use of email, bemoaned the resulting new atmosphere of "deliberation and delicacy" that "slows down communication" when "everyone is stopping and thinking about what they write" (Harmon, 1998, quoted in Baron, 2000, p. 268), most second language teachers would see this as a welcome trend. If it is the communicative, focus-on-form kind of language instruction that the language teachers are adopting in an online, computer-mediated instructional environment, it would be welcome news to them when the students' focusing on the form of language can be promoted inherently by the medium itself while they attend to the expression of meaning. This has been shown to be true to a great extent in this study, both theoretically and empirically, as can be seen in the discussion of Chapter 2 and the two empirical and judgemental analyses of Chapter 4.

It should be borne in mind though that when we look at one side of a coin there is always the other side of it that has an entirely different picture. The attitude we should embrace when we lay our hand on that coin, in this case, the Internet and the CMC that comes with it, should be how we can better improve and develop our language education system through new communication tools.

In conclusion, we will look at the internalisation problem of CMC as a common and naturalised medium of communication by all. This will have special relevance for NBLT, as NBLT owes its existence to CMC. The foundation of NBLT,
which is socially based, is further discussed and stressed. This is followed by a discussion of the limitations of this study. Finally some areas for future research that can help shed light on this new medium and form of language instruction and learning are suggested.

5.2 Internalisation of CMC as a Medium

For those who are anxious to see immediate results from any application of new technology, method, or approach, a word of caution is in order. Berg (2000) points to the importance of seeing the computer as a medium instead of just a tool or instrument, especially in the light of how computers are used in educational environments. Such a view "redirects and broadens further research to include not only a notion of how humans interact with computers, but how humans interact with a new medium [italics added]" (Berg, 2000, p. 366). Kay (1995) quoted McLuhan (1964) in suggesting that if computer were to be a truly new medium then the very use of it will change cultural and individual thought patterns. He continues to argue that in order for the message embedded in the new medium to be received by the users, the medium would have to be internalised first. In view of this Berg (2000) points to the need to develop computer viewing and using conventions for learners, such as those that have been developed over the years in viewing Hollywood films. Along with this line of argument, in order for CMC to exert any significant pedagogical or learning impact on the learners, it is crucial that the learners be taught to make full use of the CMC medium (internalisation) and be accustomed to the common interactional GUI (Graphic User Interface) and practices common to the medium. Any evaluation of learning outcomes on the use of CMC as a medium of teaching would need to take this into account before any final judgement can be
passed. However, for such a complicated medium as CMC to achieve the level of media understanding, like those found in reading a book, would take some time.

Furthermore, there is a layer to this new medium in that it allows user’s interaction and make possible the manipulation of symbols, as opposed to film and book. Oren (1995) describes it as a “metamedium” in that it can involve the manipulation of various kinds of media by the user. Interactivity is a key aspect of the computing medium. In order for it to be fully exploited in education, much more research would need to be carried out.

Thus, in order for NBLT to see its full potential being realised in terms of language learning outcome, time would seem to be a crucial factor. However, more exploration and research needs to be done so that the language teaching profession can be fully prepared to take full advantage of the situation when the time is ripe: when the use of CMC is just like making a telephone call or switching on the television, when technology is no more seen as technology and the term E-Learning has the letter “E” dropped.

5.3 Centrality of the Social Element in CALL

The basis of the human element discussed in section 1.4.1 of the first chapter lies in the ground of social interaction. According to Vygotsky (1978),

every function in the child’s cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals” (p57).

Language is cultural, including the second language. It is thus part of everyone’s cultural development.

Vygotsky’s social view of ontogenesis is to a great extent restated in Stevick’s “inside and between maxim” (p. xii). According to him, the “success and failure in a
language course depends less on linguistic analyses and pedagogical techniques, than on *what goes on inside and between the people in the classroom*" (Stevick, 1998, p. xii). In view of this, a CALL program that shifts the "between" element to a relationship between a person and a machine is going against the whole nature of learning. NBLT as a respecification and reconceptualisation of CALL that brings the focus back to the human-to-human communication is seen here to have corrected this fundamental fault.

Perhaps with the development of a more robust artificial intelligence coupled with the invention of more powerful computers, the dream of a believable (computer) social agent is achievable. However, before such a goal can be achieved, the social foundation of learning should not be ignored, but rather upheld. In fact, with the recent rise of Computer Supported Cooperative Learning (CSCL) and the multitude of benefits it ensues, there is hardly any reason for a sound educational model to build on man-machine interaction.

### 5.4 Increasing Zone of Proximal Development

Collaborative learning, as will be found in an online learning community, has the notion of Zone of Proximal Development (ZPD) at its core and does not occur in a vacuum. All such learning is situated in the matrix of space and time and will have to be influenced by the external factors (i.e. such as the participants) that constitute the learning environment.

With learning that takes place in a virtual environment where the time factor (synchronicity and asynchronicity) can be manipulated and the physical space reduced to virtual geography, more studies will need to be conducted to see to what extent ZPD can be expanded through the manipulation of time, qualitatively altered experience of space, and perhaps intensified and focused forms of interaction and
collaboration. If positive results can be obtained where it is impossible to achieve in a face-to-face interactional space, which is partly shown in this study, then CMC and NBLT will hold better promise, not just for language education, but also for education in general.

5.5 Limitations of the Study

The following sections discuss the limitations of this study in terms of coverage, transfer and generalisation of results together with some brief explanations as to the nature and cause of the limitations.

5.5.1 Scope of Study within CALL Applications

Beatty (2003) lists and discusses eight wide-ranging CALL applications to illustrate the breadth of the area available for CALL practitioners:

1. Word processing
2. Games
3. Literature
4. Corpus linguistics
5. Computer-mediated communication (CMC)
6. WWW resources
7. Adapting other materials for CALL
8. Personal Digital Assistants (pp. 52-74)

Out of these, only computer-mediated communication is directly addressed and thoroughly discussed in this study.

Beatty himself downplays the true value of researching the use of word processing applications and their spelling and grammar checkers, while literature only serves to provide the content either for CALL self-access software or games, or for the hypertext Web-based tutorials.

Corpus linguistic is more a language research tool than a classroom learning activity through the approach called Data Driven Learning (DDL) that explicitly requires learners to induce language patterns and rules. Since such inauthentic
activities do not fit into the Communicative Language Teaching framework (despite its use of real language data) and difficult to deploy in real classroom setting, it is excluded from this study.

Games and WWW resources, purpose built or adapted for language classroom, fall in the areas that are strongly argued against in this study (see section 1.4) and are thus not explored.

Personal Digital Assistants (PDAs), such as Palm and iPaq are still too young and limited to wealthy societies due to their cost. Furthermore, wireless technology using Bluetooth and IEEE 802.11b wireless protocol are still not in widespread use. This will seriously limit the usability and connectivity of a PDA, and thus its educational value.

5.5.2 Effect of Online-Facilitation Procedures on Learning Outcome

Despite the conformity of the approach to online-facilitation adopted here in this study to what has been suggested by Underhill (1999) for language teaching, the techniques used were not deployed in a systematic manner and properly controlled. This was because of the naturalistic settings of the learning environments investigated here, which were not conducive to experimental manipulations. Thus it is difficult to derive any possible links between the type of facilitation techniques used and the learning effect of the learners.

5.5.3 Model of Teaching and Learning Online through CMC

The implementation of the two online learning activities did not adopt a comprehensive model of online teaching and learning through CMC such as the Five-Step Model developed by Salmon (2000, pp. 25-37) and used in the Open University of the United Kingdom (OU). Rather it was more selective and limited in nature. The
one-on-one setting of this study corresponded roughly to Salmon’s (2000) Stage 1 (Access and motivation) and Stage 2 (Online socialization) and the group email discussion corresponded to Stage 2, Stage 3 (Information exchange) and Stage 4 (Knowledge construction).

Furthermore, the researcher/teacher was not able to carry out the full range of e-moderator’s responsibilities and employed all possible e-moderating techniques in this study due to the time limitation imposed by the full teaching workload of a conventional ESP program, where the online component could only be carried out outside such formal institutional responsibilities.

In view of these, the two online-learning environments set up in this study were not representative of a full-fledged online language program and would definitely be lacking in it effectiveness in bringing about highly significant learning outcome. However, whatever positive outcomes that could be derived from this limited study should point to the enormous potential that a full-scale program that make use of a Learning Management System (discussed in next section) can produce.

5.5.4 Incorporation into Campus-Wide Learning Management System

Learning Management Systems (LMSs) provide a platform for the online learning environment by enabling the management, delivery and tracking of blended learning (i.e., online and traditional classroom). They also support collaborative learning communities, offering multiple modes of learning—from self-paced coursework (Web-based seminars and classes, downloadable instructional content) to scheduled classes (live instruction in classroom settings or online) to group learning (online forums and chats).
The adoption of such a learning management system is now wide-spread among institutions of higher learning and some of the most popular include packages such as Blackboard and WebCT. The online discussion board is now a standard feature in all LMSs. Thus the results obtained of this study should preferably have some implications for such computer-managed learning environments. While the learner experience in this study and those that use the LMS discussion board has some fundamental similarity, it lacks in certain aspects such as the interactivity with other course contents and a better incorporation of multimedia and online contents within the discussion.

5.5.5 Language Learning Assessment

This study does not suggest what are the ways the language learning assessment can be carried out in such a setting. This is prevented mainly by the enormous amount of language data generated in such online discussions and in a less-than-structured manner. Such limitation should be eased to a certain extent when more research is carried out in corpus linguistics in the area of learner English, where the learners' language production can be compared to a standard set of learner English to determine their level of language proficiency.

5.6 Suggestions for Further Research

This study has only analysed and evaluated a small amount of observable data and attempted to establish a preliminary theoretical framework for the study of NBLT. However, more studies will be needed before NBLT can claim to deliver any predictability in promoting and enhancing second language acquisition. Studies that focus on the processes of online classroom are paramount at this initial stage in informing the nature and kind of methods that can be effectively employed in NBLT.
before further studies on language learning outcomes can be carried out usefully. At the moment, SLA research is yet to identify definitively the necessary factors that promote second language acquisition and how these factors interact with each other to bring about the best language acquisition outcome. Nonetheless, the achievement of SLA research is considerable enough and should be appropriated extensively in guiding the development of NBLT methodology.

In addition, a multidisciplinary approach should be taken for all research on NBLT in order to gain an insight into the multifaceted nature of NBLT. Furthermore, an interdisciplinary integration of the diverse fields that have a direct impact on NBLT will also be necessary to ensure that a coherent case can be made for NBLT.

A few areas for future research have been identified as follows:

5.6.1 Research in NBLT Tasks

Future research into tasks for NBLT should be based on findings and theory-based speculation about ideal conditions for SLA, particularly Skehan’s summary of cognitive conditions for SLA. NBLT as a form of CALL should not be driven by technology but be informed by the research on the nature of learning and based on a strong foundation of second language acquisition theories.

5.6.2 Need for Comparative Studies

Comparative studies will be needed to show whether NBLT as a supplement to traditional language classroom can enhance the learning experience and contribute to positive learning outcomes. However, this is only meaningful after the processes of the online language classroom are well documented.
5.6.3 Effective Online Instructional Conditions and Methodology

Experimental studies should be conducted to identify the specific factors that cause enhancement (mentioned above) and contribute to language learning potential. In other words, evidence should be gathered about the effect of online instructional conditions of learning and the kind of methodologies to be employed in such conditions. This is because various instructional conditions are possible in NBLT and this entails a corresponding change in methodology used. In addition to the two conditions and the various methodologies discussed in this study, namely one-on-one mentoring with occasional focus on form based on contingency, and the grouped, meaning-focus, content-based discussion that emphasises learners' contributions and vicarious learning, there are many other possibilities and combinations for exploration.

5.6.4 Integration with Learning Management System

Studies should also be carried out to identify the issues related to the integration of NBLT with a campus-wide Learning Management System, especially regarding the control and tracking of students' participation in NBLT as well as for evaluation purposes. This is important because CMC tools usually defy detailed tracking of students' performance. Perhaps the incorporation of text analysis computer programs such as that used for corpus linguistics (concordancers, tagging programs, etc.) can add an additional dimension to the evaluation of program quality and students' output. However, in order to do this expertise in software engineering and computer programming skills would be necessary.
5.6.5 Control and Autonomy

There is a real tension between the extent of control by the online tutor on the quality of language used and the autonomy demanded by the learner-centred nature of most networked online activities, as seen in this study. This is so because the classroom virtual environment tends to blend with the surrounding virtual environment that students engage in (everyday use of messaging facilities such as email, ICQ, IRC, etc.) such that the online virtual experiences are treated as an unfragmented whole in the mind of the user. It seems that the mental creation or representation of cyber-geography differs from the embodied experience when we enter or leave a physical classroom. This becomes an issue of concern because the language used by most frequent users of the Internet is characterised by a variety of features that do not appear in most forms of written language, such as partial sentences, invented words, and iconic symbols (smiley), even though the main thrust of written language is maintained. Should such creative use of language be controlled in a language classroom when accuracy of language production is also emphasised? And if so, to what extent? How would such control impact on the learning experience and the outcome, cognitively, affectively, and socio-psychologically? All these should be answered in further research into NBLT.

5.6.6 NBLT in Primary and Secondary Schools

This study focuses on students at the tertiary level. Studies should also be conducted to see how secondary and primary school students respond to the much more autonomous learning environment and authentic use of target language in NBLT. The question of the optimal level of control by the online tutor will need to be asked when NBLT is carried out with lower level students. Another issue would be what kind of online tasks would be suitable for such students, given their elementary
command of the target language which may cause a communication breakdown and unnecessary frustration which can be counterproductive.

5.6.7 Optimal Online Time in NBLT

Kraut, Patterson, Lundmark, Kiesler, Mukophadhyay and Scherlis (1998) find that the Internet, being a social technology, seems to produce an antisocial effect on participants. They find that “greater use of the Internet was associated with declines in participants’ communication with family members in the household, declines in the size of their social circle, and increases in their depression and loneliness” (Kraut et al., 1998, p. 1017). In view of this, and the fact that NBLT will increase the online time of language learners, studies will be needed to determine the optimal time-share of NBLT relative to the traditional face-to-face classrooms, so that the socially and psychologically negative impacts of online interpersonal communication can be minimised while the full advantage of online communication can still be exploited fully.

5.6.8 Institutional and Cultural Issues

In addition to the above there are institutional and cultural issues that need to be explored in NBLT.

The implementation of any form of NBLT is likely to affect the institution, for example to find out whether there is any valid reason to avoid NBLT on the part of the teaching staff and students, and whether the avoidance behaviour is based on erratic perception or beliefs and reasons that can easily be overcome.

In learning a second or a foreign language, it would be ideal to create an environment where the learners get to communicate with the native speakers. However, such intercultural communication in an instructional setting always poses
numerous problems due to the fact that learning a new language is partially the learning of a new culture. Thus measures need to be taken when fixing the calendar and the syllabus of such language programmes to avoid problems of cultural biases and differences in cultural beliefs.