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Language learning in a virtual world : Lessons from an online language learning community.

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Introduction: Computer-mediated communication

CMC is: 'communication that takes place between human beings *via* the instrumentality of computers' (Herring, 1996:1). Thus it is communication enabled by specific information and communications technologies (ICTs) which we can refer to as the various *types* of CMC. Within such a broad definition as Herring's, the present range of CMC types includes email, postings on electronic bulletin boards and lists, telephone text-messaging (SMS), internet relay chat (IRC), communication in text-based multi-user domains and virtual worlds (MUDs and MOOs), video and audio conferencing. Explanations for acronyms and technical terms are provided in the glossary at the end of this paper.

Dimensions of CMC

Categorising types of CMC is, on the face of it, quite straightforward: it is either text-based or not; it operates in real time or not. In fact there is a multiplicity of CMC dimensions, and distinctions between these are not always clear. In some cases there is a lack of agreement on what is and what is not CMC.

There is nonetheless a commonly held two-way distinction between CMC types which is followed in this paper.

Temporally, a distinction can be made between *synchronous* CMC, where interaction takes place in real time, and *asynchronous* CMC, where participants are not necessarily online simultaneously. We can also distinguish between *text-based* and *non text-based* CMC.

Synchronous CMC includes various types of text-based online chat, computer audio and video conferencing; asynchronous CMC encompasses email, discussion forums and mailing lists. The temporal dimension (synchronous versus asynchronous) and the textual dichotomy (text-based CMC or not) are represented in figure 1 as a 4-way matrix, including examples of CMC types.

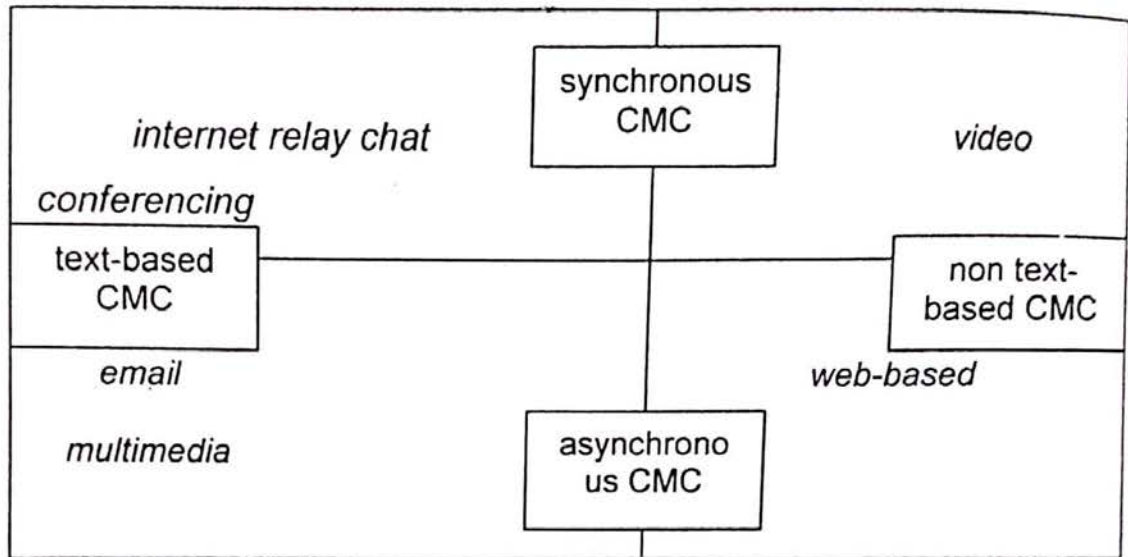


Figure 1 Some dimensions of CMC

Further distinctions can be made: between CMC which takes place over local area networks (LAN CMC) or over the internet; between CMC which is one-to-one, one-to-many, few-to-many, and so on.

As technology grows in sophistication, so such distinctions ever fracture and fragment. There are thus certain shortcomings associated with a straightforward categorisation of CMC types, however helpful such distinctions may seem.

Synchronous text-based CMC

This paper includes discussion of one type of CMC in particular: synchronous text-based CMC (SCMC).

SCMC discourse is not face-to-face spoken communication, but nonetheless takes place in real time, like speech. The sense that SCMC is in some way a hybrid of speech and writing, or that it bridges the divide between the two, drove much early research into this type of interaction.

One can understand why when the characteristics of SCMC are summarised:

SCMC is text-based human-human communication via computers. SCMC discourse happens in real time, i.e. synchronously. Turns in the forms of SCMC under discussion in this paper cannot be seen by other participants until they have been sent. Participants can scroll back and forth to re-read previously sent stretches of discourse text.

The real time nature of SCMC prompts participants in the discourse to consider it as similar to spoken casual conversation.

This inclination is reflected in commentary on the discourse type. Werry describes the language of a variety of SCMC, internet relay chat (IRC). He maintains that: '... one can identify a common impulse: an almost manic tendency to produce auditory and visual effects in writing, a straining to make written words simulate speech' (1996:58). Motteram (2000:85) refers to IRC as 'written conversation', and Chun (1994:290) believes that synchronous computer-mediated sentences '... strongly resemble what would be said in a spoken conversation.'

Extract 1 below displays many characteristics of interaction in synchronous text-based CMC.

(1)

Felix: Michael what does RealPlayer encoder do?

It converts wav into au ?? Does it make the files smaller ??

Michael C: Like I'm very considerate when I talk to MAD because I know she's so sensitive!

Maggi: Could someone really read all my ICQ messages?

Felix: He is turning into you now Mad.

Felix: Yes Mad...

Ying-Lan: I read it.

Maggi: ROTFLMAO

Michael C: Encoder converts .wav to .rm and yes it makes the files a lot smaller.

Felix: thanks for the info Mike

Maggi: Really Felix...they could?

Vance: Is encoder free?

Michael C: MAD - what id ROFLMAO?

Felix: i think so

Michael C: Encoder is free.

Felix: Yes, Maggie..My sis and i got serious problems with it...

Maggi: Rolling on the floor laughing my ass off...

Michael C: What was that about watching your mouth?

Vance: There's another use of OFF, sort of movement, figuratively.

Maggi: Well...there is some interesting stuff on mine...hmmmm

Felix: LOL

Felix: @Mad

Maggi: that wasn't my mouth...:-)

Typical features of SCMC discourse are evident in the extract above. There appears to be more than one conversation happening at a time; abbreviations are common; capitalisation and punctuation seem to be optional; and there is heavy use of acronyms, emoticons (smileys) and letter reduplication to represent the paralinguistic and prosodic features of face-to-face spoken conversation in writing.

Virtual environments and virtual communities

Data in this paper, including that in extract 1, derives from the SCMC forum of *Webheads*, a group of English language learners and tutors who meet on the internet, in a particular kind of virtual environment called a MUD: a Multi-User Domain.

In these virtual spaces on the internet participants can interact with one another in real-time – can hold written conversations – in a range of rooms or other virtual spaces which they or the system designers have created.

Developed as games in the 1960s (Eastment, 1999), these virtual spaces were originally entirely text-based; with the advances of the technology, participants in some MUDs can now design their own virtual characters which can interact visually with other participants and with the virtual spaces which have two- or three-dimensional graphic effects.

The internet allows users to log on to MUDs from any remote site worldwide.

As with IRC most interaction in a MUD is text-based and synchronous. However, in addition to the ability to interact with the environment as well as other participants, a MUD differs from IRC in that it offers other ways of communicating within

its program: email, mailing lists, bulletin boards, and paging (Ioannou-Georgiou, 2001).

The group under discussion, *Webheads*, meets for SCMC chats in a MUD. The sessions where data in this paper derives from were held weekly at a MUD called *The Palace*. *Webheads* members – tutors and students – gathered there for informal text-based chat sessions on a wide range of topics.

The Palace describes itself as a ‘graphical avatar chat’ (from its homepage). *The Palace* (figure 1) makes strong use of the graphical element of CMC by allowing for the creation of movable *avatars*, or pictorial representations of participants.

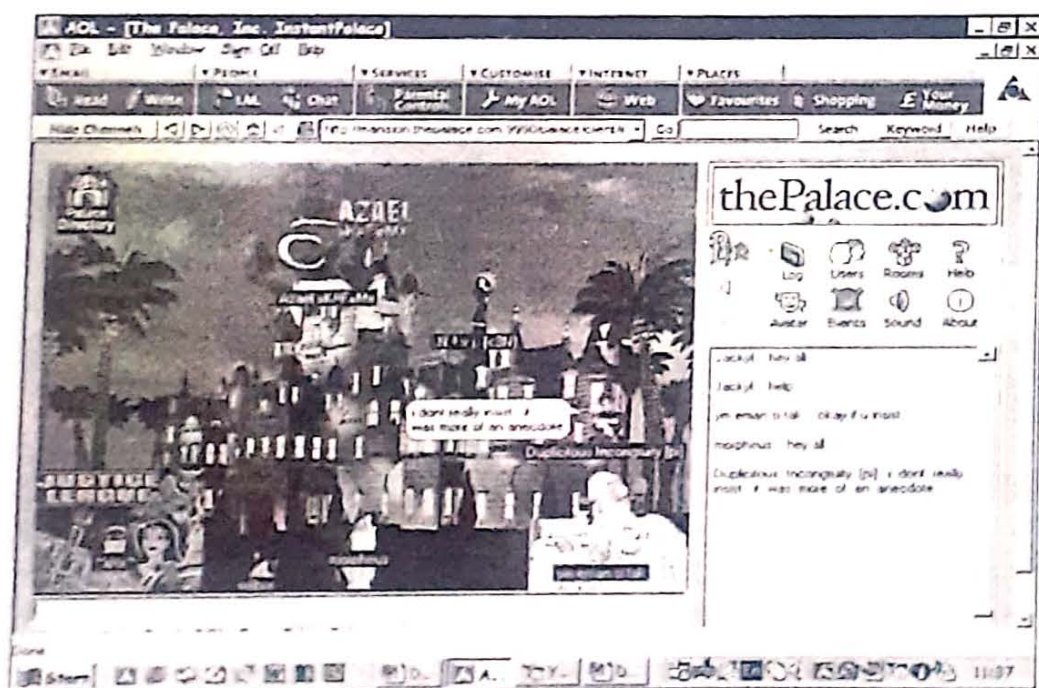


Figure 1 *The Palace* interface

The term *avatar* is borrowed from Hinduism: Vishnu is said to appear on earth in one of ten incarnations, or avatars. In the main window we see the avatars with their nickname labels. Turns in *The Palace* are typed in the white box towards the bottom of the screen, and appear in speech bubbles above the appropriate avatar.

A log of the text can be viewed as it unfolds in the box on the right of the frame. This chat log provides a more stable record of the interaction than the speech bubbles, which

disappear after a short time on the screen. The text-based interaction is *one way* (Herring, 1999; Cherny, 1999:154) in that turns cannot be seen by other participants until after they are sent.

It should be borne in mind that when SCMC interaction originally takes place, participants can see the text unfolding on their screens. They are also able to scroll back up the text box on the screen to re-read previous parts of the interaction, and cut and paste text from the log into a word document.

These properties raise interesting questions about the relationship of text to discourse. There is a common clear distinction between text and discourse, summarised by Seidlhofer and Widdowson (1999:206), where '*text* is the linguistic product of a discourse process.' In the case of spoken discourse analysis, the interaction is usually recorded and transcribed prior to analysis, effectively separating the text from the context. Regarding SCMC, participants have immediate access to the linguistic product of the discourse process. They can read the text (the product) as the interaction (the process) unfolds.

Webheads: a community of practice online

Referring to data from a single online community in this paper has a number of advantages.

Firstly, we can emphasise that technology operates within a social sphere. The contention in this paper is that the language of CMC is shaped by both the technology and the social context within which it operates.

Prioritising the social at times avoids a restriction to deterministic accounts of CMC discourse whereby linguistic and discourse features are directly attributed to an autonomous technology.

Secondly, we can avoid viewing features of the discourse as solely textual. Micro-analysis of conversation, including the written conversation described in this paper, runs the risk of treating the text as independent of the circumstances of its production. This tendency of micro-analysis can be tempered by grounding it in accounts of the social context of the community.

And thirdly, a community serves as a very useful contextual basis. Hymes (1974:4) notes that for an adequate approach to language:

AOL - (Writing for Webheads: Home Page)

File Edit Window Sign Off Help

EMAIL PEOPLE SERVICES CUSTOMISE INTERNET PLACES

Read Write MAIL Chat Parental Controls My AOL Web Favourites Shopping Your Money

Hide Channels | Go Search Keyword Help

WWW.STUDY.COM WFW

Writing for Webheads:

An experiment in world friendship through online language learning

Vance, Michael, and Maggi's online course with **EFI on English for Internet (Real Time Class)**

Start your own class with EFI: visit [website](#) or email Dave Winet at dwinet@pymnqy.transbay.net

Chat with us:
Voice discussion: <http://www.chariot.net.au/~michaels/wimbo.htm>
Text Chat and Guest Book: <http://www.hometeam.com/vstevens/>
Tapped In: <http://www.tappedin.org/Office/H220L/KeithWing>

Not Online
right now
The above icon should tell you if Vance_Stevens is logged on to Yahoo! Messenger right now.

Explore our Virtual Community

Some Webheads teachers and students are participating in the online Teaching in the Community Colleges Conference, April 2003 - [Click here for more information](#)

Meet the Teachers and Students | Learn how to chat with us | Virtual in the Community through the eyes of its members | See what Webheads have written on collaborative writing topics | Read what students say about their experience with Writing for Webheads

Start | AOL - [W... | Draft chapt... | 08:18

... one cannot take linguistic form, a given code, or even speech itself, as a limiting frame of reference. One must take as context a community, or network of persons, investigating its communicative activities as a whole, so that any use of channel and code takes its place as part of the resources upon which the members draw.

Webheads is an online community of English language learners, teachers and others which has been meeting on the internet since 1998. Many of the learners participating in *Webheads* are also simultaneously enrolled in classroom-based language courses.

Webheads for them has provided an opportunity for communication with other learners and more expert users of the language. Figure 2 shows the *Webheads* homepage:

Figure 2 The *Webheads* homepage

What happens with *Webheads* bears little resemblance to traditional teaching, or even to more established forms of distance learning.

As the group's founder, Vance Stevens (2001) says, *Webheads* has the ability to: '...do an end run around the teacher and put students in touch with other target language speakers in authentically communicative situations.' The dissimilarity of *Webheads* to a traditional classroom teaching situation is further stressed when we are reminded that *Webheads* meets online, and thus issues surrounding control of the discourse are raised. Stevens (2001) sums up his view of the dynamics of *Webheads*:

Conducting online classes, or trying to monitor chats to which we invited all comers, or moderating lists or bulletin boards, is another endeavor not unlike herding cats.

Not impossible to control, but perhaps undesirable to control. Undesirable because such projects tend to take on lives of their own. The organic nature of online interactions is a great asset, and in my *Webheads* project, I've just set wheels in motion and greased and nurtured them with a bit of HTML and email, and then I sit back and enjoy the serendipitous outcomes.

What started as a small-scale and at best partially successful online writing course has evolved into a broader, looser conglomeration of learners, tutors, researchers and others meeting in a variety of spaces on the internet.

But what sort of community is *Webheads*? Overlapping with the notions of *speech community* (Hymes, 1974; Saville-Troike, 1982) and *discourse community* (Swales, 1990), though also including *learning* within its definition, is the *community of practice*.

A community of practice is a community dedicated to learning and advancing knowledge and know-how in a given subject area among its members (Wenger, 1998; Lave and Wenger, 1991).

Communities of practice, suggests Wenger (1998), are everywhere, and individuals belong to a number of communities of practice, including virtual ones: 'Across a worldwide web of computers, people congregate in virtual spaces and develop shared ways of pursuing their common interests' (1998:6-7). Wenger's definition of a community of practice is based on individuals' joint pursuit of all kinds of enterprise, resulting in interaction, mutual engagement and, in his terms, learning. (Wenger, 1998:7):

Over time, this collective learning results in practices that reflect both the pursuit of our enterprises and the attendant social relations. These practices are thus the property of a kind of community created over time by the sustained pursuit of a shared enterprise. It makes sense, therefore, to call these kinds of communities *communities of practice*.

Practice is seen as the source of coherence of a community. The dimensions of practice, for Wenger, are mutual engagement, a joint enterprise, and a shared repertoire of ways of doing things (1998:49).

Research on communities of practice involves: '...close up analysis of face-to-face interaction in a number of rather well-established settings and social relationships like workshops, classrooms and professional groups of one kind or another' (Rampton, 2000:103). Virtual communities of practice differ from other virtual networks, according to Johnson (forthcoming): learning is the main goal, rather than socialising (social networks); task completion (virtual teams); or information exchange.

Consideration of *Webheads* as a community of practice, with a shared repertoire of discourse and literacy practices, and where learning of some sort (the joint enterprise) is involved, would seem to be reasonable. The type of learning going on may be of many kinds: language learning, for example, or learning about the technologies of CMC. To these we can add learning about the specific discourse practices of the community. Cherny holds (1999:24) that: 'Certainly learning linguistic practices is a part of becoming a member of a community of practice.'

Positioning CMC within CALL: Roles and definitions

We have introduced the international online community at the heart of this paper (*Webheads*), the space where it meets (the MUD *the Palace*), and the type of interaction involved (synchronous CMC). At this point we return to the general question of where CMC fits with conceptions of computer-assisted language learning (CALL).

Kern and Warschauer (2000) position approaches to CALL within three broad linguistic orientations: structuralist, cognitive, and sociocognitive (with the focus on the 'socio'). Despite the false implication that such matters are clear-cut, the three-way distinction serves as a framework for an overview of the evolving roles of the computer within each paradigm. These are often viewed in terms of apposite metaphors. The structuralist paradigm is associated with drills, grammar and vocabulary exercises and testing.

The role of the computer within such an approach is 'quizmaster' and 'knower-of-the-right-answer' (Jones and Fortescue, 1987:5) or 'tutor' (Taylor, 1980, cited in Levy, 1997:83).

In a cognitive model of CALL, computers provide learners with opportunities for problem-solving and hypothesis testing, in particular in simulated environments.

Learners are responsible for doing something with the resources provided by the program (Kern and Warschauer, 2000:9); in Jones and Fortescue's terminology the computer is viewed as a 'stimulus' (1987:6).

Kern and Warschauer state that in a sociocognitive framework, meaning is located: 'in the interaction between interlocutors, writers and readers; constrained by interpretive rules of the relevant discourse community' (2000:7).

In a sociocognitive approach to CALL, the computer is considered to be a 'tool' (Levy, 1997:83) or a 'toolkit' (Crook, 1994, cited in Kern and Warschauer, 2000:11). CALL within the sociocognitive framework has, for Kern and Warschauer (2000:13), a CMC role: 'To provide alternative contexts for social interaction; to facilitate access to existing discourse communities and the creation of new ones.'

Levy's concept of *computer as tool* is somewhat wider, and subsumes the CMC role. According to Levy (1997:84):

'This role for the computer [as a tool] is a fundamental one. It is the basis for the computer's widespread acceptance and use...'. Levy lists some computer tools that can aid language learning: word processor programs, concordancers, email, text-based and video-based computer conferencing [synchronous CMC], dictionaries, databases and archives (1997:84). For Levy, the conceptualisation of computer as tool also enables a shift of control towards learners, focusing on: '...how well the tool helps the user accomplish the task, not how well the computer can teach' (1997:204).

Levy's later (2000) distinction is more basic than the tutor/stimulus/tool metaphor. He distinguishes artefact CALL from CMC-based CALL. A CALL artefact, in Levy's words (2000:179) '... can include any [CALL] materials that have been specially designed and created for the purposes of language learning.' CMC-based CALL is CALL used for human-human interaction, *via* email, text-based CMC, audio and video conferencing, and discussion lists.

Levy's distinction illuminates the difference between computer as tutor and computer as tool. In summary, and to quote Levy (2000:183): 'Whereas artefact design generally sets the computer into the role of tutor for human-computer interaction, CMC-based CALL uses the computer in the role of tool to facilitate human-human interaction. Not surprisingly, the research goals and methods are rather different in focus and intent in each situation.'

A further distinction can be made between CMC-based CALL on local area networks (LAN CALL) and CMC-based CALL which takes place over a global network, principally the internet (World CALL).

The items of terminology *LAN CALL* and *World CALL* were coined by Debski and Levy (1999).

Asynchronous World CALL, in the form of email exchanges, has long been available; early synchronous CMC-based CALL was restricted to LANs, usually operating within a local physical space such as a computer laboratory.

With the continuing development, sophistication, and, in many parts of the world, ease of access to ICTs, particularly MOOs and IRC, text-based SCMC has become increasingly

used in World CALL. Specific SCMC-based World CALL projects thus tend to relate to long-distance international meetings of one sort or another, just as their email equivalents do.

The *Webheads* group can be considered an extended World CALL project in this sense.

We should add to this set of roles the one noted by Warschauer concerning the role of *English* vis-à-vis computer technology (Warschauer, 2001:4):

Just ten years ago ... it was very common for those involved in CALL to say that 'A computer's just a tool; it's not an end in itself but a means for learning English.' ... Yet earlier this year, an English teacher in Egypt told me this, and this is a real quotation from a real teacher: 'English is not an end in itself; it's just a tool for being able to use computers and get information on the Internet.'

Sociocultural perspectives on CMC-based CALL

We now turn to sociocultural perspectives on CMC-based CALL. A view in CMC-based CALL research grounded in social theory has been invoked as the basis for research into collaborative learning. Within a broad sociocultural approach, the term 'constructivism' has emerged as a label for CALL teaching and research which stresses that what is learnt depends in large part on the experience of learning within a particular social environment.

Paying attention to the social background of learners is of prime importance when investigating the discourse of communities of learners who are participating in *social* computing. Debski (1997:209) summarises this shift to the recognition of the social in CALL research: 'CALL theory and practice is...diminishingly about computers and computer software.'

Today's CALL is about how learners can establish optimal relationships between themselves and learning resources via computer-supported media in order to pursue real communicative tasks.'

The notion that interaction in the broader social context is of relevance to learning stems in no small part from Vygotsky's social theory. Central to Vygotsky's theory is the view that

learning depends to a large extent on socially constituted collaboration between the learner and others. Vygotsky theorised (1962, 1978) that there exists a *zone of proximal development* (ZPD), which he described as being '... the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers' (Vygotsky, 1978:86).

If this is the case, the implication for language learning is that collaboration, either among learners or between learners and their teacher, is vital for the learner's development. Not only this, stressed Vygotsky, but what children can do with assistance (from more able peers or from teachers) is a better indication of their mental development than what they can do on their own (Vygotsky, 1978:85).

Vygotsky's social theory, while originally applying to child learning and mental development, has also been explicitly addressed in discussion of second language learning by Lantolf and Appel (eds.) (1994), and Lantolf (ed.) (2000).

Warschauer (1997) provides a review of computer-mediated collaborative language learning from a sociocultural perspective.

Among studies of SCMC-based CALL, a number refer specifically to Vygotsky and the ZPD (Kitade, 2000; Renié and Chanier, 1995; Zähner, Fauverge and Wong, 2000).

Scaffolding Within sociocultural theory, the metaphor of *scaffolding* has been proposed as an illustration of the way in which mediation occurs in the ZPD. Donato (1994:40) describes scaffolding: '...in social interaction a knowledgeable participant can create, by means of speech, supportive conditions in which the novice can participate in, and extend, current knowledge and skills to higher levels of competence.' Aljaafreh and Lantolf (1994:469) summarise: 'The idea is to offer just enough assistance to encourage and guide the learner to participate in the activity and to assume increased responsibility for arriving at the appropriate performance.' As with the problems associated with identifying exactly what constitutes *i+1* (Krashen, 1985), so the definition of *just enough assistance* is equally dependent

on the subjective judgement of individual teachers. Wood, Bruner and Ross (1976) are more specific in their proposal of six functions of scaffolded help:

1. recruiting interest in the task
2. simplifying the task
3. maintaining pursuit of the goal
4. marking critical features and discrepancies between what has been produced and the ideal solution
5. controlling frustration during problem solving
6. demonstrating an idealised version of the act to be performed

Collaboration with reference to the metaphor of scaffolding has parallels with the interaction hypothesis (Long, 1983). Both use as a central image the notion that learners are at a certain place in development and can be drawn into another more developed space, either by input and negotiation for meaning, or by scaffolded help (including, perhaps, input). Moreover, both are concerned with the *task* as the focal learning activity.

Sociocultural theory, however, allows us to view language learning as just one part of a learner's development. In the case of a virtual community such as the *Webheads* group, the concern may equally be how scaffolding aids in the development of the skills of electronic literacy which constitute part of an individual's electronic communicative competence.

In the following section we investigate scaffolding further with direct reference to data from transcripts of SCMC interaction within the *Webheads* community.

Learning the skills of electronic literacy Instances resembling conventional aspects of language teaching and learning do occur in the *Webheads* SCMC sessions, though not with great frequency. For the remainder of this paper we investigate how aspects of the development of the skills of electronic literacy are evident in the text of *Webheads* SCMC discourse. The phrase *skills of electronic literacy* can be used as a convenient shorthand term for a number of types of knowledge. As they relate to learning in the *Webheads* group, they correspond roughly to certain components of

communicative competence (Hymes, 1972; Canale and Swain, 1980).

Here, we outline a tentative proposal for a set of components of electronic communicative competence as they relate to the particular context of this study (the SCMC forums of the *Webheads* community).

The components of electronic communicative competence, adapted from the model of Canale and Swain (1980), include the following:

A knowledge of the *linguistic system*. It is not necessary, however, to be an expert user of the language of the community to participate effectively in SCMC.

The speed of turn-taking is slower than in spoken discourse; participants can scroll back up the screen to re-read parts of the conversation, and logs of the text can be saved and studied at a later time. There are thus arguments for the use of SCMC in language.

A knowledge of the *discourse patterns* involved.

One view of cohesion in SCMC suggests that it operates to an extent through the organisation of various types of conversational floor (Cherny, 1999; Simpson, 2003). For participants, managing these floors and perhaps contributing to different floors in parallel, requires new skills. Regardless of one's level of competence in the language of the virtual environment, the ability to manage threads of SCMC discourse is a primary skill. This aspect of electronic communicative competence can be extended to include what Hauck and Hampel (2003) call *multimodal competence*. This is the ability to participate in a number of online and onscreen communicative activities at once. An example would be contributing to a voice conference while participating in text-based CMC.

A knowledge of the *technology*. This knowledge encompasses both access to the technology (the computer hardware and an internet connection) but also a technical knowledge enabling a participant to download particular software, to log on to the system, and to join a virtual community amongst other things.

A knowledge of the *sociocultural rules* of a particular virtual community. Not all virtual communities are the same.

The final aspect of electronic communicative competence includes a knowledge of the roles of participants, the topic range expected in the context, and the broad purposes of communication in the context. Hymes' parameter *appropriacy* is subsumed by this aspect of electronic communicative competence. Hymes framed this aspect of knowledge and ability for use thus: 'Whether (and to what degree) something is *appropriate* (adequate, happy, successful) in relation to a context in which it is used and evaluated' (1972a:281). In Canale and Swain's (1980) model, for an utterance to be deemed appropriate it should conform to the sociocultural rules of use (1980:30): 'The primary focus of these rules is on the extent to which certain propositions and communicative functions are appropriate within a given sociocultural context depending on contextual factors such as topic, roles of participants, setting, and norms of interaction.'

To be literate in the modern age will mean to be literate in electronic media. This is commensurate with a need to acquire communicative competence with technology.

In addition to development of the skills involved with face to face speaking and listening, and traditional reading and writing, a literate person needs, therefore, to develop the skills and strategies involved in computer mediated communication and web literacy.

For the remainder of this section we focus on two areas of electronic communicative competence: discourse competence and technological competence. These are discussed as being associated with the development of the skills of electronic literacy:

Learning to manage the discourse aspects of SCMC (for example, navigation between floors): an element of discourse competence, sometimes associated with multimodal competence.

Learning the technical skills required to participate successfully in SCMC: an element of technological competence.

The first skill, the management of discourse aspects of SCMC, relates primarily in this study to the ability to participate in text-based SCMC discourse. This requires a broad range of sub-skills.

Below in this section, we examine a stretch of discourse text where a novice participant is learning how to take part successfully in SCMC discourse by opening a log of the text chat. This is, of course, a demonstration of a very small aspect of how the discourse of SCMC is managed by participants. As noted earlier, participants not only converse in different areas of a particular SCMC space, but also take part in a number of different online conversations – both text-based and voice-based – at a time.

The second skill overlaps with the first to a great extent. The ability to participate in SCMC of any kind requires gaining access to the relevant technology. We see later in this section how the boundary between discourse competence and technological competence is not necessarily clearly defined, as we discuss an instance where a *Webheads* member is being taught how to navigate around a MUD.

The relationship between discourse and technology is not new in the history of literacy. However, with chirographic and typographic literacy the technology has been *interiorised*, to use Ong's (1982) term, to the extent where the interplay of the participant and the technology is unremarkable. Conversely an examination of electronic literacy at a relatively early stage in its development can highlight instances where participants struggle to master the technology: a prerequisite for effective participation in the discourse.

Managing the discourse of SCMC The following stretch of discourse text, extract 2, shows how individuals are taught how to use the log of chat in this virtual environment. First we outline the topic framework, features of context noted as a preliminary to analysis (Brown and Yule, 1983:78). The topic framework, incorporating features of context can be noted thus:

Conversation in the graphical MUD *The Palace* between Ying-Lan, Brazil (learners with *Webheads*), Vance, Maggi (tutors with *Webheads*), and dodo (a visitor and new *Webheads* learner), early in the history of *Webheads* SCMC meetings.

The concept of the conversational floor is also invoked. The conversational floor is a construct from the tradition of conversation analysis, comprising the following elements: participants (and their roles); verbal activity (comprising topic

and communicative action) (Edelsky, 1981; Shultz *et al.*, 1982; Hayashi, 1991; Cherny, 1999); and medium-related features such as the semi-permanent record of the interaction in the discourse text as it scrolls up the screen. The extract shows a multiple conversational floor comprising a main floor and a side floor.

(2)

Ying-Lan: ^Put "^" before
your sentence, It will
keep your ballon for a long time.

2 Vance: ^True, but most of us are using
the chat log.

Do you know how to do that?

3 dodo: ^thanks

4 dodo: no , would you tell me?

5 MAD: @64,64 !It's MAD

6 Vance: Options / Log Window

7 MAD: Hi...who is dodo?

8 Vance: Dodo is from China, Guangdong.

9 Vance: He's a new student.

10 dodo: hi, mad

11 Vance: Dodo, do you have a log window on
now?

12 Ying-Lan: ^Opne /Option/ and mark toolbox.
you

can see the tool box window at your lefe
hand. Click

the log you will see our converaton record.

13 Ying-Lan: left hand

14 Ying-Lan: hi, mad

15 Brazil: But where do I save the log ??

16 MAD: Michael is late!

17 Vance: I usually just copy it to the
buffer and paste
it to a word document

For our purposes here we are concerned with the main floor, a collaborative floor, thus we may ignore the side floor,

side sequence, surrounding the arrival of Maggi: turns 5, 7-10, 14 and 16.

The collaborative floor which remains can be named according to the three components of floor: participants, verbal activity, and topic. Thus we can label it: Ying-Lan and Vance explaining to dodo and Brazil how to use features of chat in *The Palace*.

Although the label given to the floor captures the broad picture, it comprises three distinct phases. Ying-Lan begins by explaining to dodo how to make the turn in the speech bubble remain on the screen for longer than normal (turns 1 and 3):

(2a)

- 1 an: ^Put "^" before your sentence,
keep your ballon for a long time.
- 3 dodo: ^thanks

The central collaborative teaching is done in the middle turns when Ying-Lan and Vance explain to dodo how to read the chat log:

(2b)

- 2 Vance: ^True, but most of us are using
the chat
log. Do you know how to do that?
- 4 dodo: no , would you tell me?'
- 6 Vance: Options / Log Window
- 11 Vance: Dodo, do you have a log window
on now?
- 12 Ying-Lan: ^Opne /Option/ and mark
toolbox ,
you can see the tool box window at your
lefe hand.
Click the log you will see our converaton
record.
- 13 Ying-Lan: left hand

One point to note concerning extracts 2a and 2b is that though she is a learner with *Webheads*, Ying-Lan adopts a tutoring role when the topic is one of discourse, rather than linguistic competence. She is an experienced user of SCMC, although her level of English is not high.

Finally, Brazil initiates a two-part exchange with Vance which completes the collaborative floor under discussion here.

(2c)

15 Brazil: But where do I save the log ??

17 Vance: I usually just copy it to the
buffer and paste it to a word document

Text-based SCMC would seem to be an appropriate medium for collaboration in learning the skills of electronic literacy, from a language learner's point of view. The conversation in SCMC above is essentially about SCMC discourse. Self-reflective metalinguistic interaction of this kind is suited to SCMC for two reasons. Firstly, the discourse type provides a textual record of the interaction: language learners and novices in SCMC discourse can scroll back up the log and re-read previously posted turns. Also, interaction, though synchronous, does not occur as quickly as spoken conversation. When the number of current participants is low, learners are able to follow the text more carefully than they would be able to with spoken discourse.

Technological competence

The previous example demonstrated how discourse competence may be developed in SCMC interaction. However, discussion in the chat also extended to the technological: participants have to know how to open a chat text log before they can use it as a space for conversation. In the second example of this section, extract 3, the skill being taught relates to technological competence and also, indirectly, to discourse competence. The topic framework and activated contextual features are:

Conversation in the graphical MOO *The Palace* between Vance (tutor with *Webheads*) and Ying-Lan (learner with *Webheads*).

(3)

- 1 Ying-Lan: ^I don't understand what you were talking about the room of the campus by email.
- 2 Vance: OK, press ctrl-G
- 3 Ying-Lan: ^Am I late?
- 4 Vance: No, right on time
- 5 Vance: Do you have a room list?
- 6 Ying-Lan: ^Ctrl+G like "Find user" of the the Option.
- 7 Ying-Lan: Where do we go?
- 8 Vance: Cntrol G is "go to a room" under options
- 9 Vance: But if you select it, or type ctrl-G, you will see a room list
- 10 Vance: Do you see it?
- 11 Ying-Lan: ^Yes, I did.
- 12 Vance: Can you find dorm room #2?
- 13 Ying-Lan: Yes I do
- 14 Vance: Let's not go there yet ... but ...
- 15 Ying-Lan: ^You mena Dorm Room2?
- 16 Vance: If we need a quiet place we can go there
- 17 Vance: Yes, Dorm Room 2
- 18 Vance: When I was here last time, I met a wizard who showed me that place.
- 19 Ying-Lan: Now, or later?
- 20 Vance: later

Note that the verbal interaction was taking place in one area of the screen while the other actions were being carried out simultaneously elsewhere in the site.

Of interest is the way in which Vance at certain points ensures Ying-Lan is following the instructions he gives. At certain points the participant with the tutoring role (Vance) asks the learner (Ying-Lan) questions to ensure she is attending to the correct part of the navigation. In these turns, he makes sure she can see the room list to which he is referring:

(3a)

5 Vance: Do you have a room list?

10 Vance: Do you see it?

11 Ying-Lan: ^Yes, I did.

Having received this ratification, but not before, Vance then asks Ying-Lan if she can find dorm room 2:

(3b)

12 Vance: Can you find dorm room #2?

13 Ying-Lan: Yes I do

This process, whereby a learner is assisted through a learning situation by a more knowledgeable other, resembles that in the account of learning which makes use of the metaphor *scaffolding*, discussed above (Wood, Bruner and Ross, 1976; Aljaafreh and Lantolf, 1994). Certain scaffolding functions are evident in extract 3, for example: recruiting interest in the task (turn 1); simplifying the task (turns 8-9); highlighting the relevant features (turn 16).

Not all criterial features of scaffolding as listed by Wood *et al.* are evident here. Nonetheless, two points can be made which support this aspect of sociocultural theory:

1. Any learning that has occurred here is the result of a dialogic process whereby the learner has been supported by the tutor.

2. The process was instigated by the learner: it was she who focused initially on the issue of navigating in the MOO.

These two points correspond to a large extent with Vygotsky's (1978) view that learning occurs at a result of support from a more knowledgeable other; and that such learning will only occur when it is appropriate to a learner's

current and potential level of development (i.e. the learner is within the ZPD).

Conclusion

What we call CALL is merely a label for the emergence of a tool. When the tool was a novelty and little understood, then it was of interest to refer to CALL. But we are approaching the day when CALL will be seen as a meaningless term. Computers are useful in helping us to accomplish what we have always wanted to do, and they are most useful when they are part of the woodwork. (Stevens, 2001)

CMC-based CALL in a virtual language learning community may well not be oriented towards language learning. This is to say, even if the stated purpose of learners and tutors is to learn or teach a language, the functions which are most prominent may in fact be metalinguistic (i.e. relating to the technology of the communication) or phatic (i.e. conversational and associated with the maintenance of social ties).

Kern lists some features of CACD compared with the (evidently more teacher-centred) classroom discussion mode of his study (1995:470):

- teacher control was compromised
- students' reading ability was taxed, due to the speed of the turns appearing on the screen
- grammatical accuracy suffers
- participation could be anarchistic
- discussions seem to lack coherence and continuity
- discussions resisted definitive closure

We are by now familiar enough with aspects of discourse coherence and cohesion which allow us to recognise these features of SCMC discourse. The point has also previously been made that participation in SCMC is not conducive to considered reflection (*viz.* 'think-writing' [Pennington, 2001]). Kern summarises the effect of using *InterChange* thus (1995:470):

Formal accuracy, stylistic improvement, global coherence, consensus, and reinforcement of canonical discourse conventions are goals not well served by *InterChange*. Conversely, unfettered self-expression, increased student initiative and responsiveness, generation of multiple

perspectives on an issue, voicing of differences, and status equalization are supported by *InterChange*.

Aspects of traditional classroom teaching, such as the ability to specify aims and intended learning outcomes with reference to specific language features, do not seem to be either possible or desirable in synchronous CMC used in this language learning context.

Glossary

ACMC	Asynchronous computer-mediated communication – for example, email
ASCII	American Standard Code for Information Interchange – also known as plain text
BBS	Bulletin-board system <i>or</i> service – a type of ACMC
CACD	Computer-assisted classroom discussion
CALL	Computer-assisted language learning
CMC	Computer-mediated communication
GUI	Graphical user interface
ICTs	Information and communications technologies
IRC	Internet-relay chat
ISP	Internet service provider
LAN	Local area network – a computer network covering a relatively small area
LAN CALL	Computer-assisted language learning over local area networks
MUDs	-user domains – virtual spaces on the internet where participants can interact with each other and with virtual objects
RL	Real life, as contrasted with ‘virtual’, i.e. online
SCMC	Synchronous computer-mediated communication – for example, internet-relay chat
SLA	Second language acquisition
World CALL	Computer-assisted language learning utilising the www
www	The world wide web

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The Palace <http://www.thepalace.com>

Webheads home page

<http://www.homestead.com/vstevens/files/efi/webheads.htm>