



2013 HAWAII UNIVERSITY INTERNATIONAL CONFERENCES  
EDUCATION & TECHNOLOGY  
JUNE 10<sup>TH</sup> TO JUNE 12<sup>TH</sup>  
ALA MOANA HOTEL  
HONOLULU, HAWAII

# RAISING AWARENESS OF COMPUTER- ASSISTED CLASS DISCUSSION CACD: LINGUISTIC, SOCIAL, AND CROSS- CULTURAL PERSPECTIVES.

BASIM H. ALAHMADI

MADINAH COLLEGE OF TECHNOLOGY, SAUDI ARABIA

# **Raising Awareness of Computer-Assisted Class Discussion CACD: Linguistic, Social, and Cross-cultural Perspectives.**

Basim H. Alahmadi  
Madinah College of  
Technology Saudi Arabia

## **Abstract**

*It is barely recently that Knowledge Revolution has just begun. Age Information is greatly impacting transforming human knowledge, as did printing process centuries ago. The market of Computer advances, including technology-enhanced education, is ever increasing. Educators are now able to define their needs and to tailor those technical advances to meet their needs instead of receiving ready-made prepacked collection of knowledge. This is a giant leap for mankind because global community exist in geographical world that has not only different languages but different culture too. A multimedia collection designed for Western students will probably not work in other parts of the world such as Saudi Arabia. Producing a meaningful and successful software requires a careful design by providing a range of several culturally adapted contents. Networking technologies, such as that of Computer-Assisted Class Discussion CACD , go beyond the time and place limit and come to present unprecedented solutions for this issue. This paper, therefore, will investigate the issue of deploying CACD in Saudi ELT classrooms.*

Key words: Computer-Assisted Class Discussion, ELT in Saudi Arabia, Culturally-adapted context, Sociocultural theory, Zone of Proximal Development, and Interaction.

## **1. What is CACD ?**

There are various definitions of the term “CACD” which is first coined by Bump in 1990 (Alahmadi, 2006) . Murray’s (2000) definition states “...modifying communication to include only text-based modes” which allows for “...the binary division of Computer-mediated Communication CMC into synchronous SCMC and asynchronous ACMC modes”. However, Levy (1997, p. 96) presented a seminal CMC taxonomy not dependent on the time axis, (synchronous and asynchronous), but on geographical dimensional aspects, that is, co-located (same place) and remote (different places). The definition of co-located communication is relevant to this research because it is only relevant to the Saudi context where communication is kept to a single class. Therefore, the functional definition of CACD in this paper is ‘computer mediated communications which occurs in real time and in a single class that allows learners to interact through the use of the keyboard’. Therefore, introducing CACD to Saudi English classrooms is very interesting because of two main reasons. The first is the absence of interaction in Saudi ELT classrooms. The second is the cultural sensitivity issue associated with the Saudi community. Thus, it would be interesting to shed lights on these two points. First, we will explore some aspects of Saudi culture and society that is a cornerstone of Saudi ELT classrooms.

## **2. Saudi Culture**

Saudi community is basically religious where Islam plays a vital role in determining the values, norms, practices of society and attitudes (Alahmadi, 2011). It is worth mentioning that the one of the striking feature that profoundly influences the Saudi learning system is the segregation of sexes. This is also true for every day life. This segregation is maintained physically i.e males are not allowed to mix with unrelated women. The most impressive consequences of the use of the CACDs in Saudi Arabia are that they introduced an unprecedented new means of communications of both sexes that was not viable before. Therefore, gender separation is partially overcome because although they are physically apart, they still can communicate using CACD not necessarily with each other but with the outside world. Now, it seems equally needed to present a brief idea about the identity and the norms of the Saudi society.

## **3. Identities and norms of education in Saudi Arabia.**

Saudi community is mainly built of hierarchical structures. Learners are intimidated to engage in many situations with an authority figure, such as a father or a teacher. Secondly, Saudi Arabia follows a rigid hierarchical educational system where stakeholders sanction ready-made course books. So, it is not learner-driven process. Thirdly, moreover, Saudi students see the teacher as a leading figure and as the only source of knowledge in the classroom (Alahmadi, 2011). The author, as a Saudi ex-student and teacher, would argue that (Saudi) students would find it difficult to accept a teacher who does not fulfill the two previous concepts of a) having the dominant role, and b) being the only source of knowledge in the classroom. To summarize, social, cultural and psychological factors play a vital role in the Saudi classroom. Now, a brief review of successful CACD studies is necessary.

## **4. Review of previous CACD studies.**

A considerable number of researchers believe that CACD sessions allow learners to engage in meaning negotiation which is the generator of interaction. Meaning negotiation is an ocean of comprehensible input and modified output. Employing CACD improves the students' conversational management skills/communicational strategies, the end result being greater language fluency (Lee, 2002; Blake, 2000). However, there is conflicting data about the

differences between the effects of CACD and oral face to face F2F discussion. For example, learners are expected to produce more discourse types expressing different functions of language than when they take part in F2F interaction (Chun, 1998); CACD participants apply a wide range of modificational devices similar to those found in F2F discussion (Lee, 2002). Sotillo (2000) claims that SCMC produces more output than conventional discussion, thus increasing the opportunities for interactional learning.

CACD even goes further to care for students' attitudes. Some research suggests that CACD provides learners with a less anxiety-inducing atmosphere and more equal opportunities to participate than speech (Warschauer, 1997; Kern, 1995). Kelm (1992, p. 443) comes to the same conclusion and called CACD the "great equalizer" because it especially caters for passive, marginalised or quiet learners. Kelm (ibid) conducted weekly sessions for one semester using intermediate learners of Portuguese. The result found increased participation from all students which led to more language output.

CACD also helped expand more social and cognitive aspects of language learning. Eastern hemisphere students can chat with early wake-up students at western hemisphere of Earth. Students can enjoy anonymity of CACD by choosing themselves a nickname while keeping their real identities are not disclosed (Alahmadai, 2006). This anonymity of CACD online nature produced a new sociocultural aspect that was not feasible in F2F situations. In situation like that of Saudi Arabia where sex segregation is maintained, CACD be a great potential with this sociocultural aspect. We will now investigate the potential issue of Zone of Proximal Development as being one disguise of CACD cognitive aspects.

## **5. CACD and the Social Development Theory**

ZDP was a term invented by the Russian philosopher Vygotsky, who developed the Social Development Theory, which sees learning as a socially mediated process that stresses on the significance of social interaction such as peer collaboration (Beatty, 2003, p. 95). At first, it is significant to point out that Zone of Proximal Development ZDP is synonymous to the term "scaffolding" in today's ELT literature. The *zone of proximal development* (ZPD) has been defined as "the distance between the actual developmental 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, p86). ZDP or scaffolding can be understood as the point which is beyond a learner's capacity unless with the cooperation of a more knowledgeable peers.

CACD supports social interaction by initiating a Zone of Proximal Development (ZPD) among communicators (Beauvois, 1997; Dwyer, 2005). According to Vygotsky, ZPD is constructed when scaffolding among learners occurs; this can be seen when novice learners are able to gain a success in language learning that they would not have been able to do without the help of their more knowledgeable peers. Apparently, the potential level is constructed when further assistance or additional help occurs through interaction by means of scaffolding. On the other hand, scaffolding can be differentiated from collaborative learning in the sense that the latter is an unintentional interaction process, where learners work cooperatively to help each other by setting a goal to achieve (Beatty, 2003), such as task completion. The presence of these two concepts in CACD generates a massive circulation of words, phrases, and ideas, which does not only insist on interaction as "priming" for second language acquisition but also argues for the development of sociocultural competence as a central factor in language acquisition.

CACD, according to Chun (1998) and Kern (1995), supports social interaction which in turn stimulates a social and pragmatic competence that helps users imitate the actual F2F environment in CACD by constructing a virtual relationship through greetings (Hi, Hello there, Salam), apologies (Sorry!, Oops), "soften" requests (Would you tell me please) and/or leave-takings (see you soon). There is a plethora of literature review in CACD field about guided learning, scaffolding, or peer collaboration. The author argues that they all evolve in the same field of ZPD.

## **6. CACD and F2F communications: advantages and drawbacks.**

Though there is paucity in the literature of CACD as it is in its infancy. The scattered literature of CMC and CACD reveals that the potential advantages of CACD outnumber the putative disadvantages. Yilmaz & Granera (2010) pose that students spare some ample time to plan their written utterances compared with F2F. The affective and linguistic advantages of CACD as a facilitator of communicative interaction could be: simplified input (Alahmadi, 2006) modified output (Lee, 2002) "plentiful and dynamic [corrective and negative] feedback" (Smith; 2004, p. 371); and decentralisation of the teacher's role in the classroom (Chun, 1998, p. 59). Learners should, thus, become more focused and develop a heightened sense of engagement (Beauvois, 1997, Dwyer, 2005).

CACD, importantly, provides extensive writing and reading practice (Ortega, 1997) from noticing one's own and other's utterances (Smith, 2004). Some researchers believe that in CACD there is no potential for negative, non-verbal clues of communication - frowning and stuttering (Warschauer, 1996) and that disallowing social minorities (women) to engage in discussions is reduced (Sullivan, 1998; Warschauer, 1996).

While CACD has been claimed to allow learners to learn in their own time and at their own pace (Ortega, 1997; Warschauer et al., 1996) because CMC is time and place independent (Warschauer, 1997), this may not be true since CMC is itself confined by space and time boundaries. Students must come to an assigned computer laboratory at a specific time to join a CACD session and must think and write at substantial speed and in limited time to keep the communication flowing.

On the other side of the coin, the main drawback of CMC is said to be 'lack of turn adjacency (Salaberry, 2000). Ill session management in line with previous studies was also found by Yilmaz and Granena (201). Although SCMC has been acclaimed as a new means of interaction for its immediacy in transformation of the message, Hutchby (2001, p. 182) calls SCMC a "quasi-synchronous" communication since it does not seem to have a true synchronous nature. In essence, the two main problems are a) risk of servers breaking down from congestion and b) students' overlapping contributions which generally leads to a lack of turn - a temporal gap creates a lapse in the time of message transmission (when the "enter" key is hit and the time of reception when the message is displayed on the recipient's screen). Another reason for this overlapping could be the interactive written nature of CACD. In Salaberry's words (2000, p. 6) "...turn-taking is negotiated at the level of the written language "meaning that learners' contributions cannot be organized because CACD mainly relies on 'text-based interaction' (Blake, 2000) and is a 'lean' medium of interaction (Smith et al., 2003, p. 706) since it allows only one learner at a time to take a turn. Additionally, two or multi-topics can be addressed at the same time with the utterances not necessarily fitting with what follows or precedes them. This yields a slow response, affecting the pace and quality of the interaction (Salaberry, 2000).

Kern (1992) reported that SCMC using Daedalus Interchange software has a 'quicker paced interaction' than oral discussion. In fact, a lack of turn adjacency in SCMC could yield many ignored questions and generate a large amount of information overload, which may distract learners' attention, cause disconnection of communication and result in an intermittent stream

of interaction (Smith, 2004; Warschauer, 1997). However, newly invented hi-tech chatrooms such as Odigo, Ytalk, and "ICQ" have minimised the effect of this drawback (Stevens, 2000); they now have an interactive chat option where a special chatroom displays the utterances being written or erased word by word allowing students to interact better as they are able to prepare a meaningful response, and anticipate what might be sent.

Another disadvantage of CACD is the absence of paralinguistic modes of communication (Salaberry, 2000), for instance, stress, muttering and intonation. Arguably, this could also be considered an advantage of CACD, since written speech is clearer than the spoken word as not every word spoken can be understood because of mispronunciation. CACD also lacks non-verbal strategies such as eye contact, body movements and facial expression, which communicators apply naturally to signal acceptance, refusal, and so on. Non-verbal modes of communication play a significant role in the quality of communication since speakers can add meaning by whispering or nodding the head. CACD's lack of verbal cues (stress, intonation, ...) and para/non-linguistic communication (nodding, shaking the head and so forth) makes it a distinctive medium of interaction but different from speech; speech is an explicit medium enhanced with extra features, both verbal and non-linguistic, which help to convey an exact message. To solve this matter, Crystal (2001) argues that CMC users make use of the available emoticons and kinesics - a combination of keyboard characters designed to indicate a feeling or state - as an alternative to non-verbal communication features. For instance, chatters type >:-1 and : 0 - denoting anger and amazement respectively (Hutchby, 2001). Nevertheless, lack of non-verbal communication causes interaction quality to decline leaving learners struggling to resume the mainstream of communication or escaping into alternative strategies; for example, code-switching (Beauvois, 1997) used by L2 learners who refer to their L1 by transcribing their L1 words into their L2 when facing difficult communication situations; this helps students to cope with communication breakdown. However, allowing learners to use their L1 rather than L2 is another disadvantage of written CACD.

Additionally, CMC uses a wide range of acronyms or Internet jargon (Crystal, 2001; Smith, 2004), for instance, asl - short for age, sex and location. These are ever-changing and constantly being renewed requiring users to keep-up with the jargon or leaving them unable to continue to contribute. Moreover, CACD is also a selective medium of communication requiring computer-oriented learners with at least average typing skills (Warschauer, 1996).

Blake (2000, p. 33) sees a considerable risk that CACD could be the "blind leading the blind", meaning that a learner may receive non target-like input from his peers and accordingly

reproduce it. However, Pellettieri's research (2000) shows only a minimal number of cases where learners have reproduced non target-like utterances acquired from their peers. In fact, Ortega (1997) claims that CACD discourse is more accurate than F2F, but students could be more likely to produce less accurate, more ambiguous utterances because of constraints such as immediacy of time and the newness of CACD as a means of interaction. Alahmadi (2006) calls this novelty problem "technophobia" or "technostress". The author also argues that technical problems are a long-running hazard to the overall communication process.

Finally, flaming (unacceptable behaviour) is a significant hazard of CMC because users enjoy a considerable amount of anonymity. Nevertheless, this anonymity also offers users the opportunity to be more honest and more candid in their communication with the ability to express opinions and emotions more explicitly (Beauvois, 1997; Sullivan, 1998).

## **7. Conclusion**

Previous discussions have shown that CACD can present potential benefits and facilitative conditions for promoting better ELT classes in Saudi Arabia. Furthermore, CACD was seen to be uniquely compatible with Saudi ELT classrooms in relation with susceptible issue such as culture and community norms. It is axiomatic that this investigation whetted the appetite for institutions to implement CACD in their classes. However, a discrete caution should be carried out before prioritizing CACD to F2F. Every means of education both traditional i.e F2F and modern i.e CACD has its own benefits and drawbacks. These two means must be incorporated equally, wisely and professionally. The author needs to emphasize that multimedia is interdisciplinary exercise. Both professional course book designers and qualified technical programmers must work in harmony to deliver a meaningful and successful software-multimedia that meets their students' needs. Nevertheless, the stakeholders, teachers, help-desk support and other parties included in the learning community must also be involved in the design process. Finally, this must not be misinterpreted as not to use technology in classrooms. We should always bear in mind it is our learners needs that comes before our computer learning material not vice versa!

## **8. References**

Alahmadi, B. (2006) The viability of Computer Assisted Classrooms as a facilitator of communicative interaction. *The JALTCALL Journal*, 3 (3), 3-32.

Alahmadi, B. (2011) Saudi students' perceived attitudes toward Computer-Assisted Class Discussion as a vehicle for communicative interaction. *LICEJ*, 2, (2), 393-401



- Beatty, K. (2003). *Teaching and Researching Computer-Assisted Language Learning*. London: Longman.
- Beauvois, M. H. (1997). Computer-Mediated Communication (CMC): technology for improving speaking and writing. In Bush, M.D. & Terry, R.M. (Eds.), *Technology-Enhanced Language Learning* (pp. 165-184). Lincolnwood, IL: National Textbook Company.
- Blake, R. (2000). Computer mediated communication: A window on L2 Spanish interlanguage. *Language Learning & Technology*, 4(1), 120-136.
- Chun, D. M. (1998). Using computer-assisted class discussions to facilitate the acquisition of interactive competence. In J. Swaffar, S. Romano, P. Markley, & K. Arens (Eds.), *Language learning online: Theory and practice in the ESL and L2 computer classroom* (pp. 57-80). Austin, TX: Labyrinth Publications.
- Crystal, D. (2001). *Language and the Internet*. Cambridge: Cambridge University Press.
- Dwyer, N. (2005). *Computer-assisted class discussion and second language learning: An investigation into the role of negative feedback*. Unpublished Master's thesis, University of Brighton, 2005.
- Hutchby, I. (2001). *Conversation and technology*. Cambridge: Polity Press.
- Kelm, R. (1992). The use of synchronous computer networks in second language instruction: a preliminary report. *Foreign Language Annals*, 25(5), 441-454.
- Kern, R. (1995). Restructuring classroom interaction with networked computers: effects on quantity and characteristics of language production. *Modern Language Journal*, 79, 457-476.
- Lee, L. (2002). Synchronous online exchanges: a study of modification devices on non-native discourse. *System*, 30, 275-288.
- Levy, M. (1997). *Computer-assisted language learning: Context and conceptualization*. Oxford: Pergamon Press.
- Murray, D. (2000). Protean communication: The language of computer-mediated communication. *TESOL Quarterly*, 34(3), 397-421.
- Ortega, L. (1997). Process and outcomes in networked classroom interaction: defining the research agenda for L2 computer assisted classroom discussion. *Language Learning & Technology*, 1(1), 82-93.
- Salaberry, M. (2000). L2 morphosyntactic development in text-based computer-mediated communication. *Computer Assisted Language Learning*, 13(1), 5-27.
- Smith, B. (2004). Computer-mediated negotiated interaction and lexical acquisition. *Studies in Second Language Acquisition*, 26, 365-398.
- Smith, B., & Gorsuch, G. (2004). Synchronous computer mediated communication captured by usability lab technologies: new interpretations. *System*, 32, 553-575.

- Sotillo, S. (2000). Discourse functions and syntactic complexity in synchronous and asynchronous communication. *Language Learning & Technology*, 4(1), 82-119.
- Stevens, V. (2000). Developing a community in online language learning. In Z. Syed & D. Heuring (Eds.), *Tools of the trade: Teaching EFL in the Gulf* (pp. 85-101). Abu Dhabi: Military Language Institute.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Warschauer, M. (1996). Comparing face-to-face and electronic discussion in the second language. *CALICO Journal*, 13, 7-26.
- Warschauer, M., Turbee, L., & Roberts, B. (1996). Computer learning networks and student empowerment. *System*, 24(1), 1-14.
- Warschauer, M. (1997). Computer-mediated collaborative learning: Theory and practice. *The Modern Language Journal*, 81(4), 470-481.
- Yucil Yilmaz & Gisela Granena. (2010). The effects of task type in Synchronous Computer-Mediated Communication. *Recall*, 22 (1), 20-38.